

Railway Age

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September 30, 1939

No. 14

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Part I of the proceedings at the three-day session of the fifty-fourth annual convention of this group recently held in Chicago, at which the problem of increased demands for safe and economically-maintained track were discussed.

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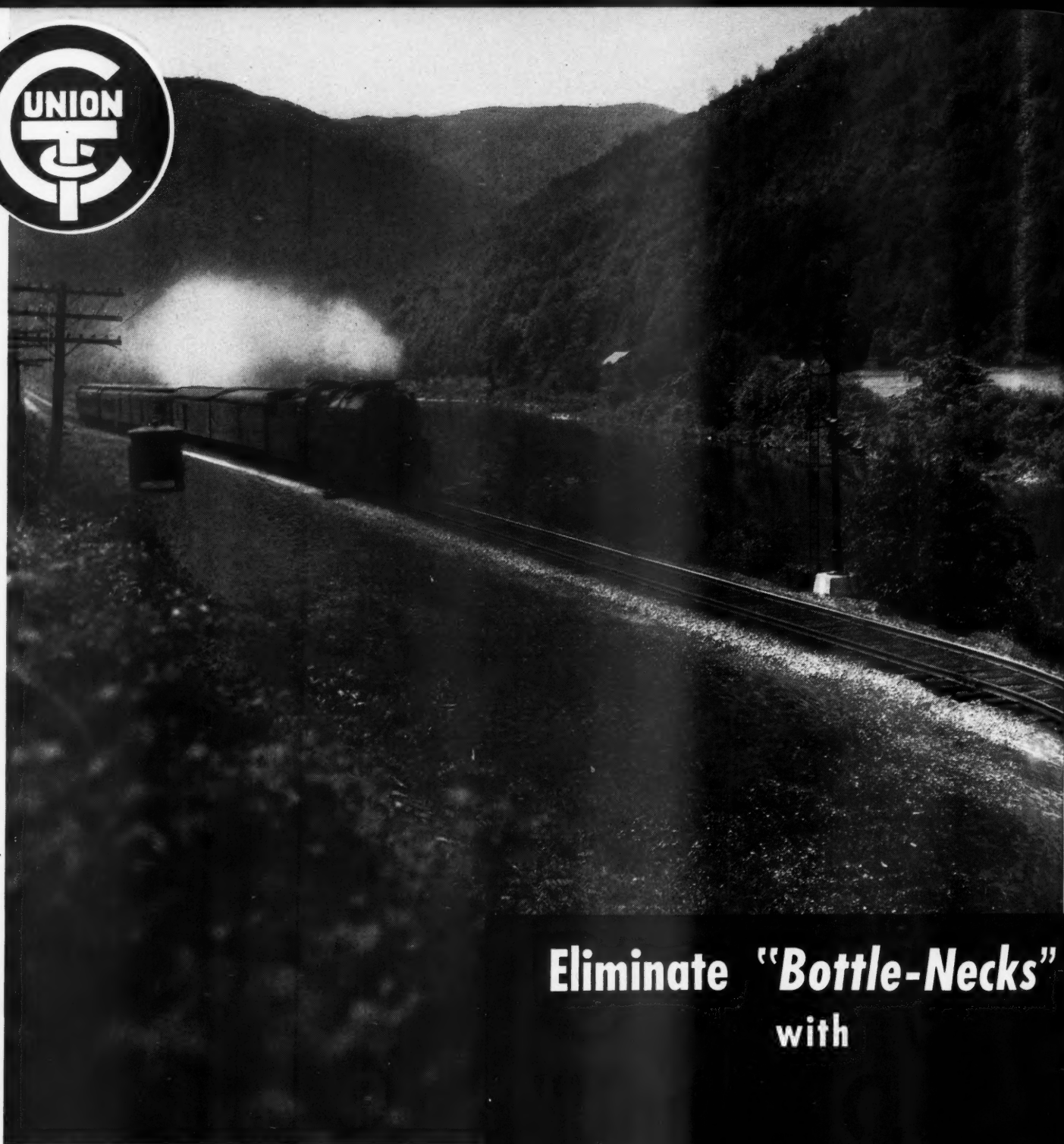
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Eliminate "Bottle-Necks" with

INCREASING track capacity, particularly at bottle-necks, is one important advantage of "Union" Centralized Traffic Control. On an eastern railroad, installation of "Union" C. T. C. to control switches and signals at each end of a 4½ mile stretch of single track, has minimized delays and permits expedited train movements. The block signal indications supersede time-table superiority and take the place of train orders.

Why not investigate the other economic and operating advantages of "Union" C. T. C.?

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RAILWAY AGE

The Railroads' Third Great Program

The railways of the United States, for the third time within a quarter century, have boldly pledged themselves with all possible publicity to perform for the American people what on each of the former two occasions proved, and on the third occasion may prove to be, a vast task of vital importance.

In April, 1917, immediately after this country entered the Great War, their chief executives met, pledged themselves to merge "during such (war) period all their merely individual and competitive activities in the effort to produce a maximum of national transportation efficiency," and to this end created an organization headed by the Railroads' War Board with "authority to formulate . . . a policy of operation of all or any of the railways, which policy . . . shall be accepted and earnestly made effective by the several managements of the individual railroad companies here represented."

In April, 1923, the chief executives again announced concerted action by the railways to deal with a quite different emergency—one of peace. They had been returned to private operation in March, 1920, after two years of government operation, in a debilitated condition, physically and financially. This had been followed in 1921 by a terrific decline of traffic and earnings and in 1922 by a nationwide strike of railway shop employees in the midst of which there had begun a sharp upturn of business and traffic. The cumulative effect was a so-called "car shortage" which in the fall of 1922 became the largest one in history and which lasted until May, 1923. The chief executives of the railways not only announced plans for putting their existing equipment in better condition and improving its utilization, but also for making capital expenditures in the year 1923 of more than one billion dollars, of which 515 million was to be for freight cars, 160 million for locomotives and 425 million for trackage and other facilities.

On September 19, 1939, the chief executives adopted and announced their third similar program. The conditions were different from those existing on either of the previous occasions. War had again begun in

Europe; but our country had not entered it, as it had in April, 1917. And our railroads were not handling a record-breaking traffic as in both 1917 and 1923. But there was already occurring an increase of traffic before the present war in Europe began; the beginning of the war had stimulated this increase; and the railroads, unlike their experience prior to 1917 and 1923, had been passing through a ten years' depression during which the amount and aggregate capacity of their equipment had steadily declined. Consequently, a question had been raised regarding their probable ability to meet the demands upon them, whether we engaged in war or not.

The Pledge and Program of 1939

Their collective answer was published in an article in our issue of September 23, beginning on page 432, entitled "Railroads Roll Up Their Sleeves." "The railroads are putting themselves in readiness in advance of demand," said the Association of American Railroads after the member road-meeting on September 19. "As they did in 1923 the railroads have determined to spend money which they have not earned in order that they may meet a public need, on the faith that there will be hereafter a square deal in public transportation policies. . . . Terminals and tracks will be kept open, and cars will be kept moving, should any tendency to congestion show itself, through the nation-wide permit system of the Association of American Railroads developed since 1920. . . . The railroads are and will continue to be ready to meet national needs."

The First Collective Program—1917

In considering whether they probably will "make good" with their latest program, it will be worth while to recall how they carried out their two previous programs to which we have referred. Their 1917 program was adopted (1) to help the government in carrying on the war and (2) to keep the railroads out of government operation. It is easily demonstrable that it accomplished

the former purpose. The traffic handled in 1917 exceeded by 8 per cent the previous record-breaking traffic handled in 1916, whereas the increase under government operation in 1918 was only 2 per cent over 1917. Why, then, was the second purpose—that of avoiding government operation—not accomplished? This was entirely the fault of the government—as the evidence proves to the hilt. Under private operation in 1917 the government did not give them either the rate advances or the financial guarantees necessary to maintaining their solvency; it increased their operating difficulties by a multiplicity of conflicting priority demands of which it immediately relieved them under government operation; it reduced the efficiency of their car supply by routing many thousands of cars to the north Atlantic seaboard where they could not be unloaded; and so on ad infinitum.

The so-called “breakdown” of the railroads in 1917 was correctly characterized by this paper at the time as actually a breakdown of government because it was due to the failure of government to give the railroads a chance to make good. And subsequent experience with government operation throughout 1918 and 1919 proved that this view was correct—that the railways actually served the country much better under private operation in 1917 than subsequently under government operation, and would have served it still better in 1917 if the government had given private management’s Railroads’ War Board the same opportunity and support that it later gave its own Railroad Administration.

The Second Collective Program—1923

How, then, about the program adopted in 1923? For at least eight years there was never the slightest question raised about its complete success; and the only question raised later was as to whether in carrying it out management was not too successful, with the result of expanding investment and facilities too much. For the railroads not only made in 1923 the more than one billion dollars of capital expenditures that they promised to make, but in the eight years ending with 1930 made a net increase in their total investment (allowing for all retirements of property) exceeding 5 billion dollars. This not only enlarged capacity, but enabled improvements in operation which both further increased capacity and greatly bettered service. In addition railway management took the initiative in behalf of organization of the Regional Shippers’ Boards which have been, and can continue to be, most helpful in promoting such distribution and unloading of cars as greatly increase their utility.

In consequence, there has never been since 1923 anything resembling former “car shortages.” The development of trucking undoubtedly has contributed to this result; but the important point in this connection is that the railroads did fully carry out the program they announced in 1923 and by doing so probably prepared themselves to handle satisfactorily all the traffic that

would have been offered to them even if the service of other carriers had not increased.

The 1939 Program—Can They Make Good?

How, then, about the program of 1939? Can and will the railroads make good on it? They could not make good on certain estimates mistakenly issued early in September that they could handle 45 or 50 per cent more than “present” traffic with existing equipment; but probably this will never be shown because they will add substantially to their equipment before any such increase in traffic occurs. In fact, the only development that could prevent them from making good on their promise to “meet national needs” would be a phenomenally rapid increase of their freight traffic. It actually did increase 33 per cent more than seasonally between the week ended May 13, 1939, and the week ended September 16; and it increased 11 per cent more than seasonally in the single week ended September 16 as compared with the week ended September 9. Furthermore, analysis of the figures shows the increase in loadings of the various classes of commodities was comparatively well-balanced.

Loadings in the week ended September 16 were almost 806,000 cars. Experience and all analyses of the situation that have been made by experts indicate that weekly loadings no more than 20 per cent in excess of that—i.e., loadings of about 970,000 cars a week—would be the very maximum that could be handled with existing equipment. It does not seem probable that the peak of traffic reached in October, 1939, will equal that figure. There may reasonably be expected to be subsequently a *seasonal* decline even though the *general trend* of traffic continues upward. That will afford the railroads some months to acquire a large amount of additional equipment before the generally upward trend of traffic—assuming it continues—will cause them to need it.

Prospective Net Earnings and Buying

In the statement issued on September 19 by the Association of American Railroads its member-roads assured the public that “as traffic and earnings may justify it, additional equipment will be ready to meet demands which may develop.” How much traffic, and therefore earnings, will increase is purely speculative. But the present equipment situation, the recent increase of traffic, and the assurances and promises just given to the public, make it very evident that the time has come largely to increase the buying of equipment. Can the railways do this? Fortunately, they can buy it much easier than any kind of materials because equipment can be financed with trust certificates which many private investors are always glad to get and which apparently the government would be willing to buy in large amounts. Fortunately, also, net earnings—which in the long run always determine how much equipment

and materials the railways can and do buy—have been increasing as traffic has been increasing.

In May carloadings were only 56.3 per cent as large as in 1929, and net operating income was only 25 million dollars, or at an annual rate of 1.32 per cent. In July carloadings were 60.6 per cent as large as in 1929, and net operating income was over 49 million dollars, or at an annual rate of 2.07 per cent on investment. Loadings, and probably net earnings, slipped some in August. But in the week ended September 16 loadings were 70 per cent as large as in 1929—not quite as

large as in 1937, but larger than in 1936. Continuance of a more than seasonal increase in loadings—which now seems entirely probable—would make net earnings in the last one-third of the year at least as large as they were in the last third of 1936 when they were 302 million dollars and net earnings for the year about 600 million dollars—perhaps larger than any year since 1930, excepting 1936.

The increase of net earnings in 1936 and the early part of 1937 caused substantial increases in purchases of equipment and materials, especially the former.

What Will the Traffic Bear?—33

The industrial traffic manager who diverts tonnage from the railroad to trucks or barges undoubtedly believes that, in doing so, he is reducing transportation costs and acting in the direction of greater economy. But is he?

The figures indicate quite the contrary. In a remarkable study recently published by the Twentieth Century Fund (reviewed in *Railway Age* of

terials). This unit transportation charge is double what it was 25 years ago.

From 1928 to 1933 alone the cost of transportation rose from 5.4 per cent of the value of finished goods to 7.8 per cent.

Such increases in the relative cost of transportation put the whole transportation industry on the spot—giving producers an incentive to reduce their use of transportation to a minimum and seek substitutes for it—in other words, to decentralize production and use short-haul raw materials.

What is the cause of the growing cost of transportation? Plainly, it is the lack of relationship between *costs* and *expenses*. **The shipper diverts his goods from railroad to barge or truck—not because barges and trucks are less costly, but because they are less expensive (an important distinction!).**

Barge rates and truck rates which *understate* barge and truck costs, combined with railroad rates which *overstate* railroad costs, have fostered wasteful duplication of transportation facilities. Investment in transportation facilities has trebled since 1920. Who is going to pay for this enormously increased plant? Obviously most of it has already been paid for by the taxpayers—but that is to the railroads' disadvantage, because it is only their competitors which get tax-built plant.

Thus the railroads have everything to gain by fostering a system of competitive transportation rates which reflect the true comparative economy of the competitors.

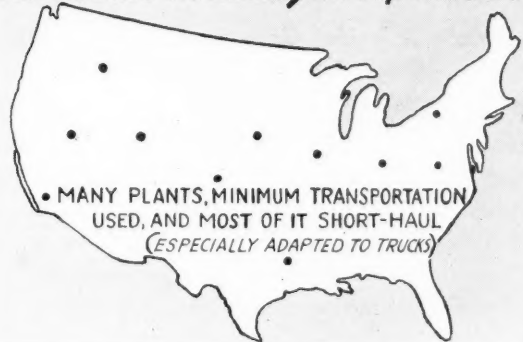
At least a billion dollars of revenues formerly accruing to the railroads are now going to newly-created, rival facilities—and the diversion is continuing to grow. A great deal of transportation revenue has been permanently destroyed by decentralization and technical innovations which have been invited by transportation costs being out of line with other costs of industrial production.

It will be a slow process to re-create the revenue lost to decentralization, but further loss from this cause can be minimized if not completely checked by the railroads, if they will observe their real costs of producing transportation service in making rates, wherever decentralization threatens. This method of pricing should also recover to the railroads a large part of the billion dollar revenue *temporarily* being enjoyed by competitive forms of transportation to the railroads' detriment.

An Industry's Map in 1914



The Same Industry's Map in 1939



September 16, page 415), it is shown that distribution costs (including transportation costs) have been constantly rising relatively to production costs.

Distribution costs now amount to more than half of the total price paid by the consumer. Of the total distribution costs, transportation comprises about 25 per cent. In other words, out of every dollar paid by the ultimate consumer, some 13 cents is earmarked for moving his purchase from primary sources (i.e., including transportation of raw ma-

The number of locomotives ordered increased from 87 in 1935 to 533 in 1936, and then declined to 368 in 1937. The number of freight cars ordered increased from 18,699 in 1935 to 67,544 in 1936 and then declined to 52,738 in 1937. But in spite of the increase in 1936 and 1937, in orders over the depression level, those placed for locomotives and cars in those years were small compared with the additional numbers that would be needed in case of a really large increase of traffic.

"In Faith on a Square Deal"

Usually the amount of buying of equipment and materials has been about the same over any considerable period as the amount of net earnings made—the former, on the average exceeding the latter by some 3 or 4 per cent. In the absence of excessive advances in operating costs or taxes a continued increase in traffic would cause a relatively large increase in net earnings which would afford the means of increased buying. But could equipment bought with additional financial resources provided by a large increase in net earnings be acquired in time satisfactorily to handle the large increase of traffic that caused the increase in net earnings? Railway management itself has in effect answered that question.

In the statement issued on September 19 it said, "As they did in 1923, however, railroads have determined to *spend money which they have not earned* in order that they may meet a public need, in the faith that there will be hereafter a square deal in public transportation policies." What that plainly means is that it is the railroad program of 1939 to begin making purchases exceeding those warranted by current net earnings in the hope that the public will cause the administration and Congress to adopt the legislative program necessary to establishing equality of opportunity in competition between the railways and other carriers and to rehabilitating railway earning, employing and buying power.

The statement issued by the railroads says the present situation is not unlike that in 1923. It is also in important respects not unlike that in 1917. The railroads then needed fair and co-operative treatment from the government to enable them to carry out their program; but they did not get it. Hence two years of government operation, with all its unsatisfactory results. They now need fair and co-operative government treatment to carry out their 1939 program—including adoption by Congress and the state legislatures of legislation which in fairness and the public interest should have been adopted if no new war had begun in Europe or there were not the remotest danger of this country getting into it. Surely government will do as much to help the railways prepare themselves to meet any national emergency that may come as it would have been required by fairness, decency and the public interest to have done if there never had been any such emergency or prospect of one.

Hysterical Car Orders

At the meeting of the Trans-Missouri-Kansas shippers' regional advisory board last week, the present "hysterical buying," brought on by the war, was discussed in considerable detail. This meeting, one of the first of these board meetings since the current increase in traffic, also brought out the fact that there is a tendency toward "hysterical car ordering" on the part of some shippers. The Association of American Railroads has declared that the railways are capable of handling a much larger traffic without a car shortage—and so they are. At this meeting it was shown that all of the roads are rapidly expanding their car repair forces and otherwise doing everything in their power to make the supply of cars adequate for all traffic needs. The Car Service division of the A. A. R. is also securing railway co-operation in providing prompt return of empties to the owner lines.

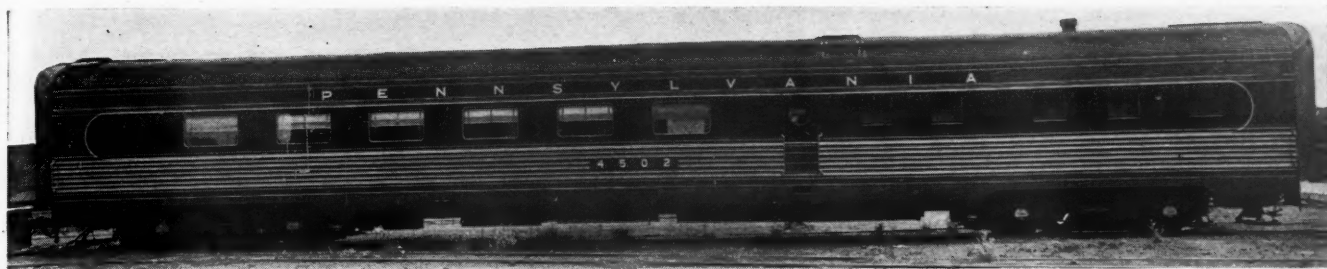
This, however, is not enough. In the last few years the surplus of cars has resulted in some shippers developing the habit of ordering cars to meet possibilities or probabilities rather than actual needs. If a car shortage is to be avoided shipper co-operation is essential, and this can best be obtained through the medium of the shippers' regional advisory boards, which were originally set up for this very purpose. The meetings of these boards are now more than ever matters of executive as well as transportation and traffic department interest. At the meeting mentioned above a number of railway executives, including the president of one of the largest transcontinental systems, were in attendance, an example that might be followed profitably at all such meetings throughout the country.

* * *

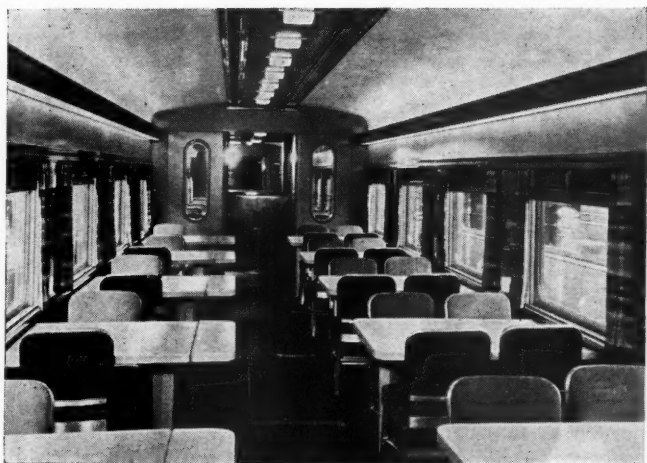
Plainly It Is Not Government Money Alone Which Attracts Travel to the Air

This writer is impelled to add a footnote to record one vivid impression left upon him by this and other air-journeys. That is the impression of American *youth* at its very best. It seems to him that this air-business, from top to bottom, must be attracting the very cream of our young men and women, who in their complete competence, infinite courtesy and wholesome simplicity and directness of demeanor, offer the traveler a service that not only disarms criticism but makes him feel that he is in the hands of his friends. To us old folks, who are perhaps too prone to exchange jeremiads over the youth of today, this is a most refreshing and encouraging experience, and one to be remembered when the temptation to despair of our country assails us. These men and women may be the cream—but poor milk does not produce good cream, and this cream is very good!

—Former Commissioner Woodlock in the Wall Street Journal.



Pennsylvania Receives Diners from Three Builders



Lightweight cars characterized by simple, but colorful interiors

of the cars built by Pullman-Standard; the Budd-built cars are of stainless steel; the cars built by the American Car and Foundry Company are of high-tensile, low-alloy steel.

The interior architecture and decorations of all of the cars were designed by Raymond Loewy, industrial designer, in collaboration with the engineers of the railroad and the builders. Except in minor details, the kitchens, pantries and dining rooms are of the same arrangement and capacity. Basically, the color schemes of all three lots of cars are similar, but differ in the secondary colors employed in the combination. Each lot has a distinctive motif, but all are worked out in the same medium; that is, patterns etched on pilaster mirrors.

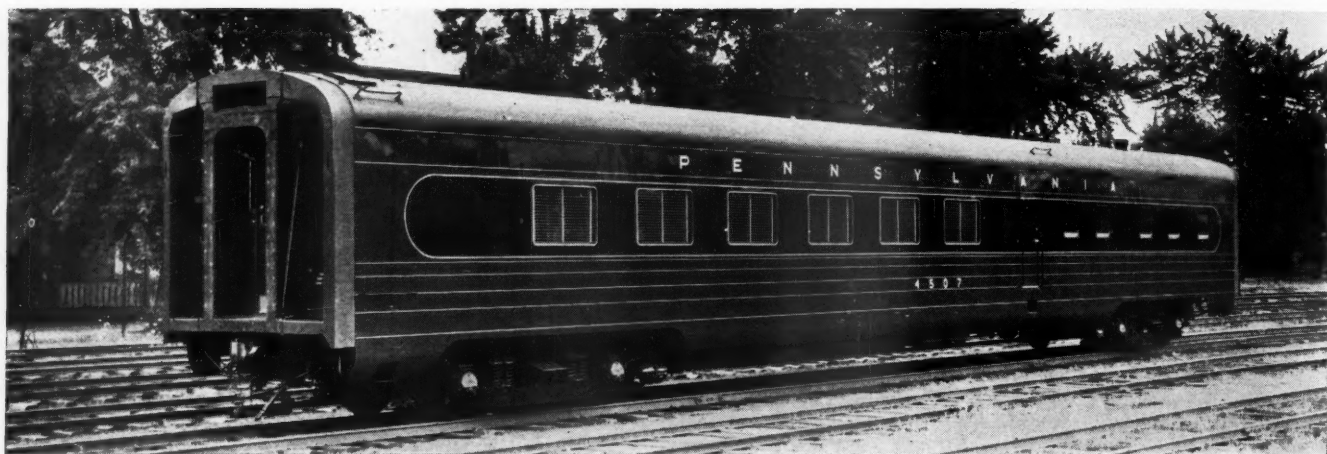
EARLY in January the Pennsylvania ordered 15 dining cars, five from the Pullman-Standard Car Manufacturing Company, five from the Edward G. Budd Manufacturing Company, and five from the American Car and Foundry Company. All of the cars are built to the same general specifications and are believed to represent the first instance in which three dissimilar sets of materials and techniques of construction have been so employed.

Aluminum alloys are the principal structural material

In all of the cars the tables on one side have drop leaves which permit the car to be set up to serve either 36 or 48 persons. Twelve of the aluminum chairs can be folded up for storage, but when in use they conform in general appearance to the other chairs in the car.

Each of the three lots of cars is described in one of the following articles.





Exterior of the Low-Alloy Steel Dining Car

Low-Alloy Steel Cars Built by American Car & Foundry Co.

Pennsylvania diners of high-tensile pressed-steel members and welded construction result in car weighing 113,240 lb. light

FIVE dining cars were recently delivered to the Pennsylvania from the Berwick, Pa., plant of the American Car and Foundry Company, which were built principally, insofar as the structure is concerned, of Cor-Ten side- and under-framing members with Armco HT50 side sheathing and Cor-Ten roof sheets spot welded to Armco pressed-steel carlines. The principal weights and dimensions of these diners are shown in an accompanying table and one of the drawings shows the floor plan of the car.

The kitchen occupies a space 7-ft. 2 $\frac{1}{4}$ in. wide by 26 ft. 2 in. long, with an adjoining passageway 2 ft. 3 $\frac{1}{2}$ in. wide. The dining room is 52 ft. 9 $\frac{3}{4}$ in. long with crew and linen lockers and a buffet at the kitchen end of the dining room. A dining service bar, and steward's, chair storage and electrical equipment lockers are located at the opposite end of the dining room. Twelve tables, each seating four persons, furnish a maximum seating capacity of 48. When the full seating capacity of the car is used, there is a 2 ft. 1 $\frac{3}{4}$ -in. aisle through the car, which can be increased an additional 12 in. in width by virtue of drop leaves on all of the tables on one side of the car. The tables are of Plymetl construction and the chairs are made with aluminum frames and upholstered seats and backs. Each table is centered at a large 4 ft. 3 $\frac{3}{4}$ -in. width window. The windows are fitted with Edwards sash having plate glass on the outside and safety glass inside.

The Car Structure

The underframe for these cars is built-up of pressed and rolled Cor-Ten steel members welded together. Like the other structural units—sides and roof—the under-

frame was fabricated by arc welding in a jig, the welding being done by an automatic welding machine. After each of these unit assemblies was completed in the jig, the sides were attached to the underframe and the roof to the sides; the ends being fabricated in place. The two side members of the car are fastened to the underframe and to the roof assembly by means of rivets through the Z-bar and angle shapes, which together form the side sills and top side plates of the car, respectively. This is the only riveting used in the structure for the assembly of major parts.

Two A. A. R. Z-26 sections, each weighing 31.3 lb. per ft., welded together on the center line of the car form the inverted U-section center sill. Together they comprise a member 13 $\frac{9}{16}$ in. wide at the top and 12 $\frac{13}{16}$ in. deep. The center sills are forked at the ends of the car and are welded to the buffer castings. The center sill is reinforced at each end by a 10 in., 15.3-lb. channel extending from the end buffer through the body bolsters to a point approximately 5 ft. beyond the transverse center line of the bolster. These reinforcing members are welded to the buffer casting, the center sill, the bolster and to the three cross bearers.

The main cross members of the underframe exclusive of the body bolsters consist of five cross ties and 19 cross bearers. The cross ties are built-up members consisting of channel-shaped top compression members and Z-shaped bottom tension members with U-shaped struts which are flattened at the ends where they are welded to the top and bottom members. The cross ties are notched at the end for the side sills and are welded at the connections with the side and center sills. The cross bearers are channel-shaped pressings 4 $\frac{13}{16}$ in. deep at the center with the bottom flange welded to the

top of the center sills. The ends of the cross bearers and the top members of the cross ties extend under the inside flanges, and butt against the vertical web of the side-sill Z-bars. The side sills are 6.1-lb. Z-bars welded to the cross members.

The body bolsters are pressed U-sections with ribs welded in and partial bottom cover plates welded in such manner as to form flanges extending outward at the bottom. Four flanged triangular-shaped reinforcing ribs are welded in a horizontal position at the center sill-bolster connection flush with the top of the center sill.

A flat aluminum false floor, $\frac{1}{16}$ in. thick, is laid on top of the underframe. Over this and riveted to the transverse underframe members are seven longitudinal floor stringers $2\frac{1}{16}$ in. high, pressed Z-shape from 13-gage material. A floor of corrugated aluminum is fastened with No. 10 machine screws to these floor stringers. The space between the upper and lower floors is filled with Stonefelt insulation. A $\frac{3}{8}$ -in. Armstrong cork floor is laid on top of the corrugated aluminum. The outside longitudinal floor member is a W-shaped pressing, the top of which extends above the level of the cork floor and is attached to the longitudinal sheet-metal member which forms the floor radiator duct.

The end buffers are nickel-alloy steel castings to which are welded the center sills, sill reinforcing channel and end posts. The end posts are two 9-in. channels welded to the buffer casting and extending from a point $\frac{1}{2}$ in. above the center line of the couplers to the roof. A $\frac{1}{2}$ -in. filler plate is welded to the inside of the channel end posts from the bottom to a point 30 in. above the top of the buffer casting, thereby increasing the section of the end posts. The end-post channels are fastened to the roof structure by welded angle connections after the roof is applied. The end door frames are formed by two pressed shapes, one of which is welded to the web of the end-post channels and the other to the outer flange. These shapes are welded together for forming the box-section pressed-steel door frame. Side skirts of $\frac{1}{16}$ -in. aluminum plate are attached to the bottom of the side sills and are held in position by diagonal stiffeners at cross members.

The sides of the car are welded units 7 ft. $7\frac{5}{8}$ -in. high

and 82 ft. $4\frac{1}{2}$ -in. long. Six large window openings, 2 ft. $5\frac{7}{8}$ in. by 4 ft. are located in the dining section and five small window openings 2 ft. 1 in. by 2 ft. $0\frac{1}{16}$ in. in the kitchen section with a door opening adjacent to the buffet location between the kitchen and dining sections. Both sides of the car are of similar arrangement as to window and door openings.

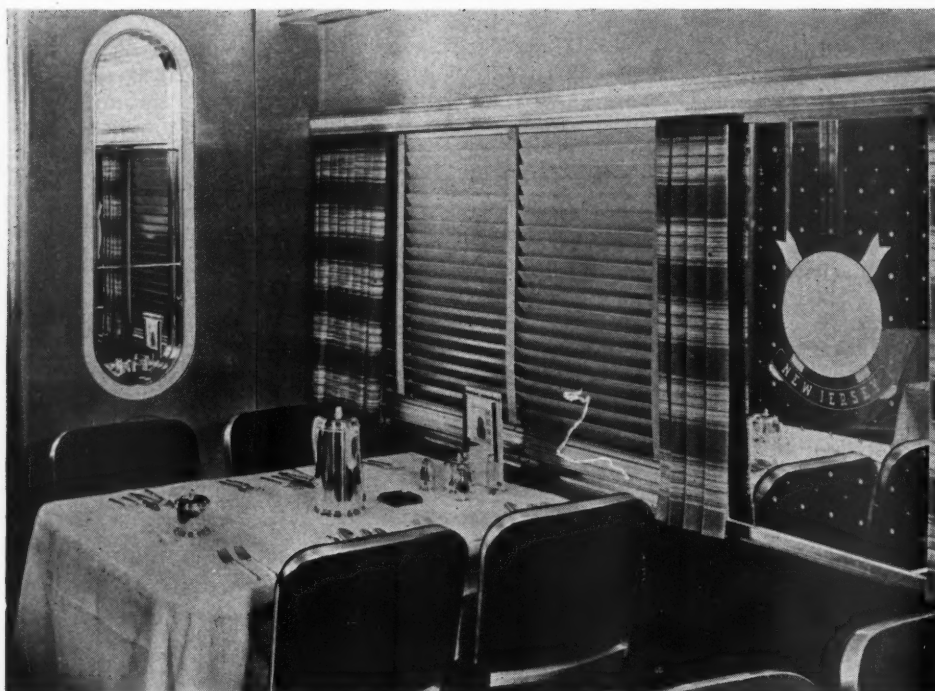
The car sides consist essentially of 14-gage Armco side sheathing spot-welded to the pressed and rolled Cor-Ten-steel framing members. The side plates at the top



The Kitchen and Pantry Are Finished in Stainless Steel—The Steam Table and Coffee Urn Are Designed for Operation Either by Steam or Electricity—Lighting and Ventilation Are Special Features of the Arrangement



The Cars Are Lighted by Center Ceiling Fixtures and Side Lighting in Troughs—Air-Conditioning Inlet Grilles Adjoin the Ceiling Lights



Oval Mirrors Are Set Into the End Panels and the Panels Between Windows Are Decorated with State Seals Etched in Gold on Mirrors

are formed by the use of a 3-in., 5.0-lb. Z-bar. The side sill connection at the bottom of the car sides is a $2\frac{1}{2}$ -in. by 2-in. by $\frac{3}{16}$ -in. angle, the bottom leg of which is riveted to the underframe side-sill Z-bar when the sides are secured to the underframe. The side posts are 3-in. Z-bar sections formed from 12-gage steel and extend the full height of the car side from sill to the plate adjacent to the window and door openings.

Above and below the window openings in the dining section are cripple posts formed in the shape of 3-in. Z's from 15-gage stock. In the kitchen section, cripple posts under the small window openings are formed from 15-gage material in the shape of an angle. A belt rail under the dining room windows is a Z-shaped pressing formed from 13-gage material and the window headers in the dining section are smaller Z-shaped sections formed from lighter gage material. The framing and the side sheathing form a wall 3 in. in nominal thickness. The inside side wall sheathing is $\frac{1}{8}$ in. and the space between the inner and outer side walls is filled with Stonefelt insulation.

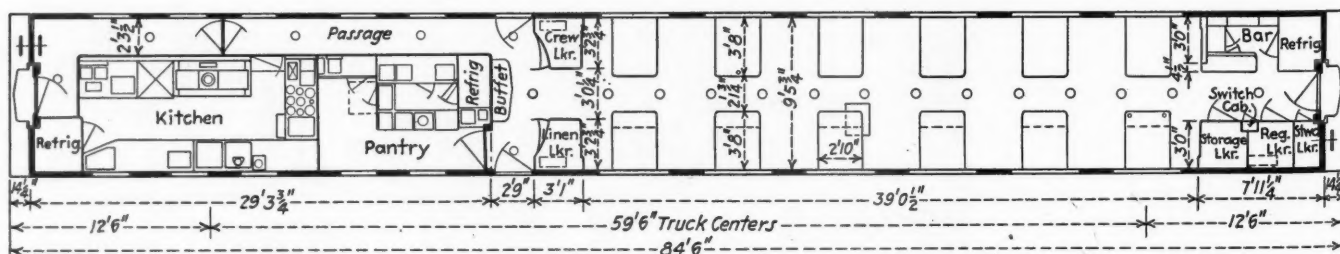
The roof is in the form of a rigid welded sub-assembly, the framing of which is built up of pressed and rolled Cor-Ten-steel members and carlines of pressed Armco steel. Cor-Ten roof sheets $\frac{1}{16}$ in. thick are spot welded to the roof framing. The completed roof unit, as it comes from the jigs, is 10 ft. $\frac{5}{16}$ in. over the carlines and 82 ft. $4\frac{1}{2}$ in. long. The carlines at the ends of the car and over the kitchen section are pressed Z-shaped members made from 13-gage material. Over the dining-

room section the carlines are in the form of a truss, the top and bottom chords and struts of which are pressed from 13-gage material.

The middle of the carlines over the dining-room section is open to provide for the air-conditioning duct. Four rows of purlines are welded between the carlines the full length of the car. Those in the kitchen and steward's ends of the car are formed from 16-gage material, Z-shaped, $2\frac{3}{4}$ -in. deep while the purlines in the dining-room section are Z-shaped pressings from 16-gage material $\frac{1}{2}$ in. deep. An additional purline of 13-gage material pressed in the form of an angle is added to the kitchen section as a connection for the bulkhead between the kitchen and the passageway. The roof of the car is insulated with 2-in. Stonefelt held in place by No. 12 wire and the air-conditioning ducts are insulated with 1-in. Stonefelt.

Interior Design

These new diners combine pleasing, restful colors, glareless illumination and new materials in a manner to create an atmosphere of restful simplicity. The decorative scheme is built around such colors as soft yellow, mulberry and gray green augmented by accents of satin-finished aluminum, stainless steel and opalescent lacquer. The center ceiling is finished in gray green and the air-conditioning outlet grilles, running the full length of the dining room on either side of the center ceiling, are trimmed in aluminum with yellow stripes. The side



Floor Plan of One of the Dining Cars

ceilings are an oyster white. The walls below the side lighting troughs are a gray green and the trim above the windows is aluminum and yellow. The side walls below the windows are finished in a mulberry shade which blends with the floor covering and the chair upholstery.

Venetian blinds at the large windows adjoining the tables are finished in satin-finished aluminum and windows draped with a mulberry background and horizontal stripes complete the decorative scheme. At the end

tain 25-watt lamps. The lights in the side troughs, on each side of the car, consist of thirty 15-watt lamps and the wiring for the side lighting is so arranged that 15

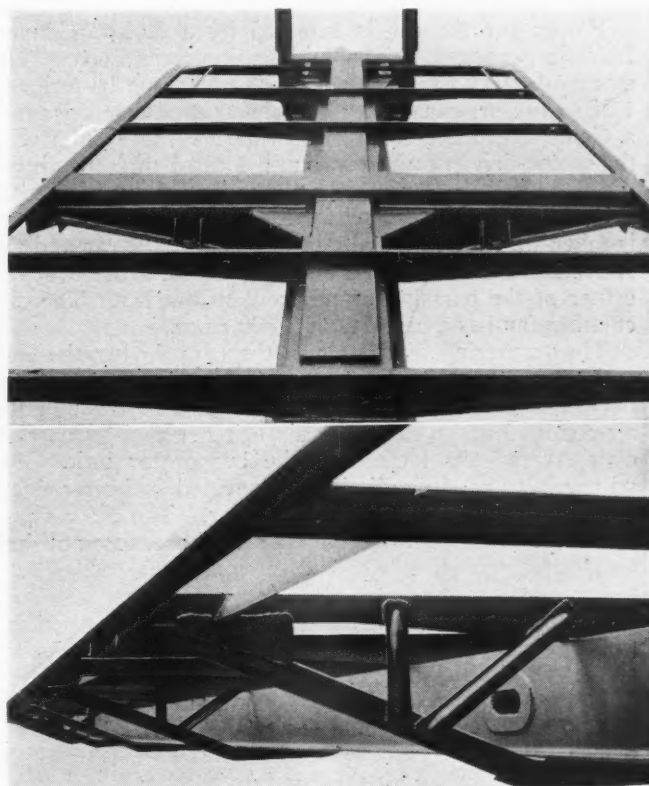
Principal Weights and Dimensions of the Pennsylvania Diners Built By the American Car and Foundry Co.

Length over body end posts, ft.-in.	82-2½
Length over coupler faces, ft.-in.	84-6
Truck centers, ft.-in.	59-6
Width over side posts, ft.-in.	10-0
Width inside, ft.-in.	9-5¾
Height, rail to floor, ft.-in.	4-3
Height, rail to top of floor, ft.-in.	13-6
Weight, light, total, lb.	113,240
Weight, in running order, lb.	125,580
Weight of trucks, lb.	34,300

of the dining room, opposite the kitchen, an oval mirror is set into one side of the end bulkhead, while an oval plate glass window of the same size in the opposite bulkhead enables the steward to see out into the dining room. Oval mirrors of the same design appear on both sides of the aisle at the kitchen end of the dining room and a buffet, with a wall mirror behind, sets off the center of the car at the kitchen bulkhead. The 10 pier panels between the windows in the dining room are finished with mirrors on which are etched in gold the state seals of several states served by the Pennsylvania.

Lighting Details

An important feature of the car is the lighting which is supplied by ceiling fixtures and side-wall illumination. A total of 19 ceiling fixtures is used in the dining room and passageways. The ceiling light fixtures each con-



The Underframe Is a Welded Structure With Bolsters, Cross Bearers and Cross Ties Embodying the Use of Pressed Alloy-Steel Members

alternate lamps may be controlled in each side-light group from separate switches, making it possible to have a total, for the two sides of the car, of either 30 or 60 lights on at one time. The side troughs completely house

Interior of the Car Structure After the Application of the Insulation



the lamps, the top of the trough being covered with ground glass and the bottom with a diffusing plastic. Incandescent lamps are also used to light the passageways and the car is equipped with electric marker lamps with a distributor switch on the platform and 30-watt lamps in the fixtures.

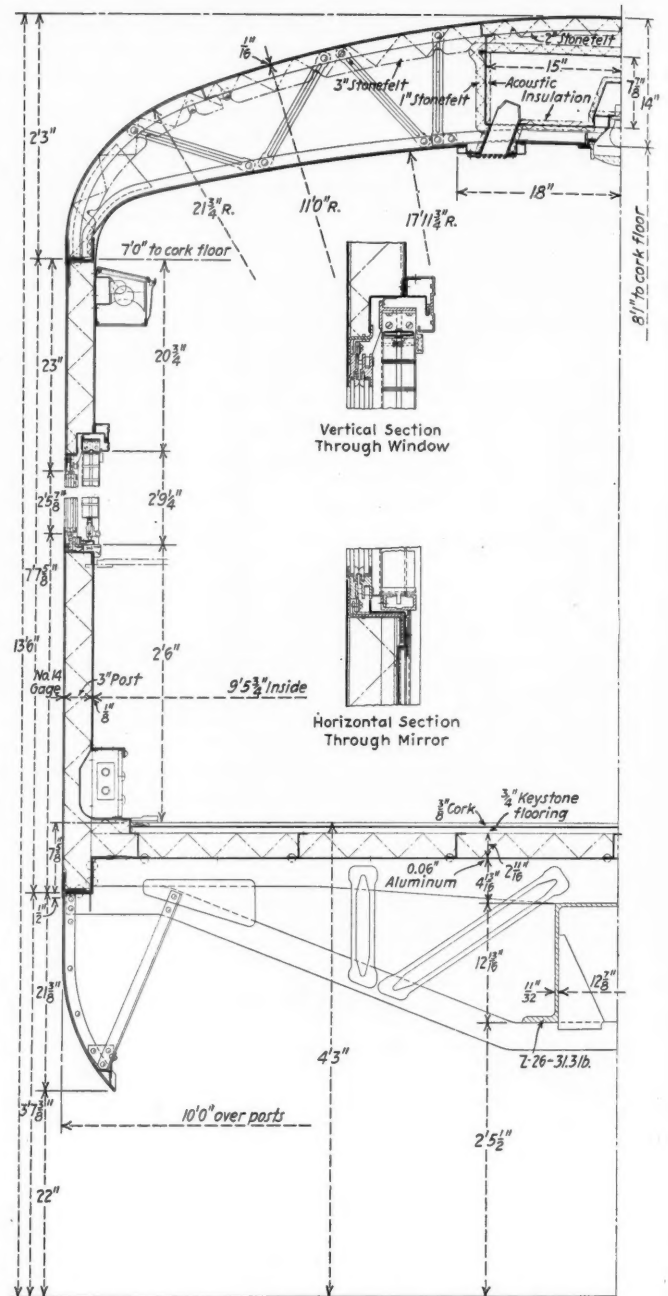
Power for the car is supplied by a 20-kw. General Electric generator driven by a Spicer gear drive. The storage-battery equipment consists of Edison batteries of 1,250-amp.-hr. capacity. The air-conditioning system is a General Electric 5-ton electro-mechanical system with the motor-driven compressor unit located underneath the car floor and the evaporator above the ceiling at the bar end of the car. Fresh air for the air-conditioning system is taken in through a grille in the side of the car and the recirculated air through a 30-in. by 30-in. grille over the center of the passageway adjacent to the bar. The circulating fan has a capacity of 1,500 c.f.m.

The tempering of the air in the cars during the Fall and Spring weather is accomplished by the introduction of warm air delivered to the dining room through the air-conditioning system, the air being heated by passing over steam coils located in the evaporator unit. For winter heating, fin radiation is provided in heater ducts on the floor at both sides of the car. The delivery of steam and the control of temperature are accomplished by Fulton Sylphon electrically controlled valves and thermostats.

The kitchens in these cars have an interesting ventilation system. A 500 c.f.m. motor-driven blower supplies air for an air curtain at the pantry door through 4-in. by 4-in. ducts. Air for kitchen ventilation is taken into a plenum chamber through two 16-in. by 25-in. intake grilles in the car sides and 6-in. by 20-in. ducts. A 1,000 c.f.m. fan forces this air into the kitchen through 8-in. by 20-in. ducts and three, 8-in. Anemostats.

Outlets in the canopy over the range, broilerizer and vegetable steamer and grilles back of the range and broilerizer, are the principal means of exhausting the hot air and cooking odors from the kitchen into an overhead duct and exhaust plenum chamber from which it is carried through a 10-in. by 25-in. opening in the car end, above the door, by a 1,700 c.f.m. exhaust blower. When coupled to an adjoining car, the inner and outer diaphragms form a duct to carry the odors to a level below the car floor. The ventilating system, in addition to eliminating the smoke and odors, also reduces the high temperature considerably below that usually encountered in the dining-car kitchens.

The trucks under these cars are the double-equalizer design with 36-in. wheels and a 9-ft. wheel base. The



Cross-Section of the Low-Alloy High-Tensile Steel Car



The Trucks Are of the Double-Equalizer Design Equipped With Roller Bearings, Balanced Wheel Sets, Clasp Brakes and Shock Absorbers

axle journals are 5½ in. by 10 in. and operate in Timken roller bearings. The wheels are multi-wear rolled steel carefully balanced and with treads ground after mounting on the axles. The trucks are equipped with Simplex unit clasp brakes, the two brake cylinders on each truck being located on an integral bracket extension at one end of the truck frame. Houde shock absorbers are secured to the truck frame cross members.

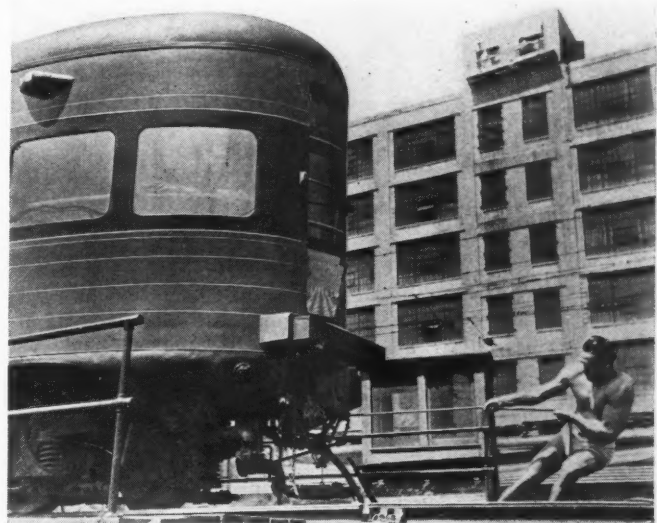
These cars are equipped with Westinghouse HSC brake equipment, National Malleable and Steel Castings Company's tight-lock couplers and Waugh rubber draft gear.

Partial List of Materials and Equipment Used on Diners Built by the American Car and Foundry Company for the Pennsylvania

Cor-Ten steel; wheels and axles.....	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Steel carlines and sheathing.....	American Rolling Mill Co., Middletown, Ohio
Trucks, bolsters and side frames...	General Steel Castings Corp., Ed-dystone, Pa.
Truck springs	American Locomotive Co., Railway Steel Spring Div., New York
Roller bearings	The Timken Roller Bearing Company, Canton, Ohio
Couplers	National Malleable and Steel Castings Co., Cleveland, Ohio
Draft gear	Waugh Equipment Co., New York
Upper buffer springs.....	Standard Railway Equipment Mfg. Co., Chicago
Rubber closures	United States Rubber Co., New York
Deadening pads	Fabreeka Products Co., Inc., Boston, Mass.
Shock absorbers	Houde Engineering Corp., Buffalo, N. Y.
Air brakes	Westinghouse Air Brake Co., Wil-merding, Pa.
Clasp brakes, coupler yokes, castings	American Steel Foundries, Chicago
Brake shoes	American Brake Shoe & Foundry Co., New York
Hand brakes	National Brake Co., Buffalo, N. Y.
Bolster locking center pins.....	W. H. Miner, Inc., Chicago
Self-tapping machine screws.....	Shakeproof Lock Washer Co., Chi-cago
Sash	O. M. Edwards, Inc., Syracuse, N. Y.
Vestibule face plate lining.....	Scandinavia Belting Co., Newark, N. J.
Diaphragms and attachments; cur-tains	The Adams & Westlake Co., Elk-hart, Ind.
Diaphragm curtains	The Morton Mfg. Co., Chicago
Venetian blinds	H. B. Dodge & Company, Chicago
Aluminum; false floor	Aluminum Co. of America, Pitts-burgh, Pa.
Cork base and strip.....	Armstrong Cork Co., Lancaster, Pa.
Carpet	Anthony D. Calabro, Philadelphia, Pa.
Carpet pads	E. I. du Pont de Nemours & Co., Newburgh, N. Y.
Dining chairs	General Fireproofing Company, Youngstown, Ohio
Mirrors	Art Glass Co., New York
Doors	Haskelite Mfg. Corp., Chicago
End door locks.....	Jas. L. Howard & Co., Hartford, Conn.
Locks	Yale & Towne Mfg. Co., Stam-ford, Conn.
Kitchen equipment	Angelo Colonna, Philadelphia, Pa.
Heating and air-conditioning control equipment	The Fulton-Sylphon Co., Knoxville, Tenn.
Axle generators; air conditioning...	General Electric Company, Schenec-tady, N. Y.
Generator drive (Spicer).....	Safety Car Heating & Lighting Co., New York
Anemostats	Anemostate Corp. of America, Phila-delphia, Pa.
Batteries	Edison Storage Battery Div., Thomas A. Edison, Inc., West Orange, N. J.

Charging receptacles	Albert & J. M. Anderson Mfg. Co., Boston, Mass.
Circuit breakers	Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
Fans	B. F. Sturtevant Co., Hyde Park, Boston, Mass.
Air-conditioning grille	Aluminum Co. of America, Pitts-burgh, Pa.
Filter	Air-Maze Corporation, Cleveland, Ohio
Lighting fixtures	Electric Service Supplies Co., Phila-delphia, Pa. Luminator, Inc., Chicago
Steam hose connections	Barco Manufacturing Co., Chicago
Insulation; pipe covering	Johns-Manville Sales Corp., New York
Fire extinguishers	Pyrene Mfg. Co., Newark, N. J.
Paint	E. I. du Pont de Nemours & Co., Wilmington, Del.

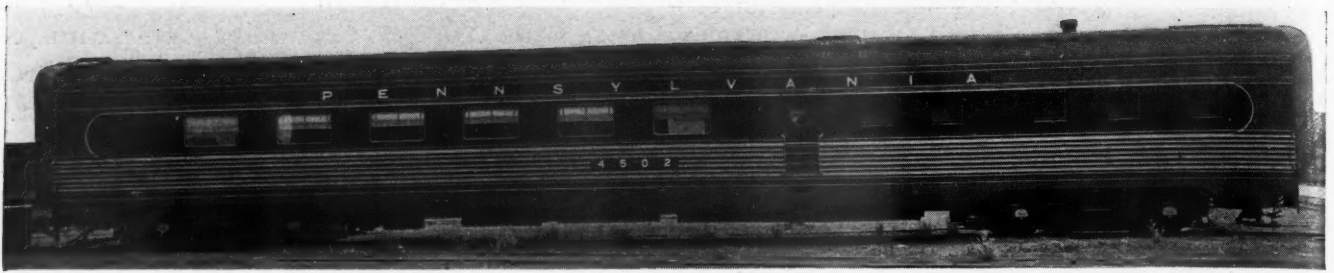
* * *



Strong Man Charles Atlas, Weight 178 Lb., Recently Pulled This Observation Car of the Pennsylvania's Broadway Limited, Weight 145,000 Lb. a Distance of More Than 100 Ft. at the Sunnyside Yards, New York. The Demonstration was Staged by the Timken Roller Bearing Company and the Pennsylvania to Test the Qualities of the Tapered Roller Bearings Installed On the Car



These Flagstones Lead to the Original Terminus of the New Castle & Frenchtown, Built in 1832, Later Absorbed by the Delaware Railroad and Now a Part of the Pennsylvania



A Pennsylvania Diner of Stainless-Steel Construction

Budd-Built Cars of Stainless Steel

Entire structure of five Pennsylvania diners of pressed and drawn stainless-steel frame members and sheets, except end-sill castings

THE five Pennsylvania dining cars built by the Edward G. Budd Manufacturing Company are typical of the form of construction employing stainless steel in relatively thin sections joined by the Shotweld process, first developed by this company about five years ago. The total weight of each car is 118,170 lb., without water or supplies. The trucks weigh 35,610 lb. each.

Body posts and carlines are of open flanged-channel section. These open sections are attached to roof corrugations and side-sheathing clips in such a fashion as to increase the torsional stability of the open sections. The characteristic form of diagonals is an I-section formed by the joining of two channel members back to back. Floor beams are drawn channels with re-entrant flanges on the open side. Floor stringers are simple Z-members. The floor and roof sheathing down to the side plate immediately above the windows is corrugated material. The fluted sheathing below the side windows carries no load.

The side framing is a modified Pratt truss construction. In addition to its function as a member of a box girder, of which the roof system is the compression member and the side sill and floor system the tension member, the sides of the car are designed for resistance to local side loads. The longitudinal members are the side plate above the windows, the belt rail below the windows, and the side sill. All are continuous, except where doorways in the side of the car interrupt the belt rail. Where this occurs a flat reinforcing sheet applied under the corrugated sheathing over the letterboard panel gives additional shearing strength.

The side plate is made up of two deep channel sections which are welded together, back to back, a hat-shaped molding section on the outside and a continuous cover plate on the inside. The carlines terminate in the upper channel and the side-frame members in the lower channel. The belt rail is made up of the hat-shaped molding section on the outside and an inside cover plate, with spacer channels between the posts. The side sill is a built-up member, including the outside longitudinal molding, channel spacers between posts, and a continuous cover plate on the inside. Welded to the cover plate to form an integral part of the combined member is a wide shallow box-section Z-bar and corrugated-plate struc-

ture which extends about 9 in. into the floor. This member is continuous from end sill to end sill. With the corrugated floor plates, which are welded directly to its inner flange, it forms a stiff girder to resist lateral forces.

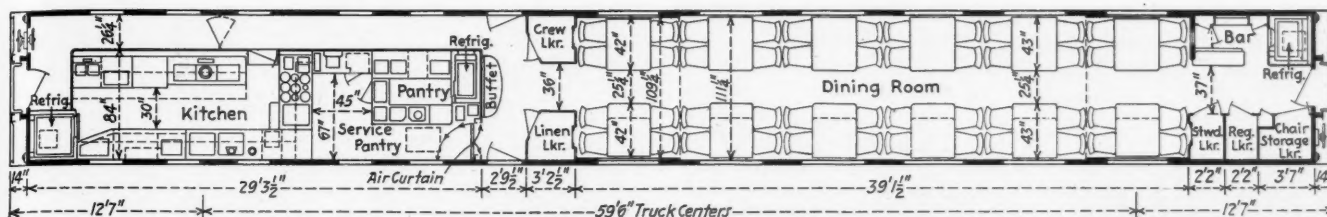
The center sills are built-up sections of stainless steel, each part drawn from a continuous strip of $\frac{3}{16}$ -in. or $\frac{1}{4}$ -in. metal. They are $13\frac{1}{2}$ in. wide by 9 in. deep and have an area of 18.02 sq. in.

The center sills are rigidly tied into the car structure at the ends of the underframe. They extend through the bolster to a point abutting the rear draft-gear stops. The draft sills extend back over the center sills to the bolster and are part of an end underframe structure which extends up to the floor and to which the corrugated floor sheets are directly welded. This structure is widened out in two steps, first from the bolster to the secondary end sill and again from the secondary end sill to the end sill. The outside longitudinal members at the latter point are immediately behind the lower ends of the end posts and serve to receive and distribute forces delivered against these posts back into the floor structure as well as to the center sills via the draft sills. The end underframe members are formed of $\frac{1}{8}$ -in. to $\frac{3}{16}$ -in. stainless steel. The corrugated floor sheets in this part of the car are 0.040 in. thick. Through the middle portion of the car the thickness is reduced to 0.020 in.

The floor system consists of the transverse channel beams already referred to which extend across the car immediately above the center sills and so are unbroken. Above these are light Z-section stringers, to which the transversely corrugated floor sheets are welded. Throughout the length of the car the center sill is stabilized by vertical angles which are welded to the sides of the sill and the faces of the floor beams.

The End Structure

The principal members of the end structure are the collision end posts at either side of the end vestibule opening. Each post is a box structure built up of a channel and a Z-bar with a flat cover plate on the inside face and a flanged cover plate on the outside face, all of $\frac{1}{8}$ -in. stainless steel. These members have been re-



Floor Plan of the Budd-Built Car

inforced with $\frac{3}{16}$ -in. stainless-steel plates applied inside from the bottom of the sill against the faces of the main members to a height of 30 in. above the floor level and a $\frac{3}{16}$ -in. reinforcing angle applied over the outside cover plate from a point $\frac{7}{8}$ in. below the floor level to a height of 48 in.

At the bottom this post extends down over the face of the end sill, through which it is welded to a longitudinal member of the end underframe. The outside cover plate is continued over the bottom of the post and vertically below the face of the end sill where it is welded to a continuation of the inside cover plate, and both are riveted to the face of the cast-steel coupler carrier-iron support. The back face of this casting is supported directly against an extension of the longitudinal underframe member. These castings serve as anti-telescoping members. Between the lower ends of the end posts is a steel buffer casting which is riveted to the end sill and end posts.

At the upper ends the posts are tied directly into the roof, which is reinforced for the purpose of distributing end loads to the entire roof structure. The reinforcement consists of a flat plate 3 ft. square applied to the carlines at the end of the roof back of each end post and through which the corrugated roof sheets are welded to the carlines. A flat reinforcing strip 9 in. wide extends back for another 3 ft. 6 in. Outside of the roof, directly in line with the post, is a T-section purline reinforcement which extends 6 ft. back from the end of the car. This is formed by welding stainless-steel angles back to back and welding the two to a shallow horizontal channel purline which extends from end to end of the car. The edges of the roof sheets overlap the sides of the channel and are welded to it.

The inside cover plate of each end post terminates

$\frac{5}{4}$ in. below the upper end of the post to admit a longitudinal channel section of that depth which extends into the post and is welded to its sides. This channel is 24 in. in length. A second longitudinal channel is inserted between the flanges of the deep channel. The latter channel has a total length of $38\frac{1}{4}$ in. and its flanges are welded to the under side of the carlines. Longitudinal fillers between the carlines above this member are welded directly to the roof reinforcing sheets and to the flanges of the end-post attachment member.

Stress calculations indicate an ultimate strength, under end loads, of 2,000,000 lb. on the center line of the coupler, 1,510,000 lb. against the end sill, 1,000,000 lb. end-post resistance to shear at the top of the underframe, 255,000 lb. at a point 18 in. above the top of the underframe, and 102,600 lb. in line with the conventional end plate or end-post top connections.

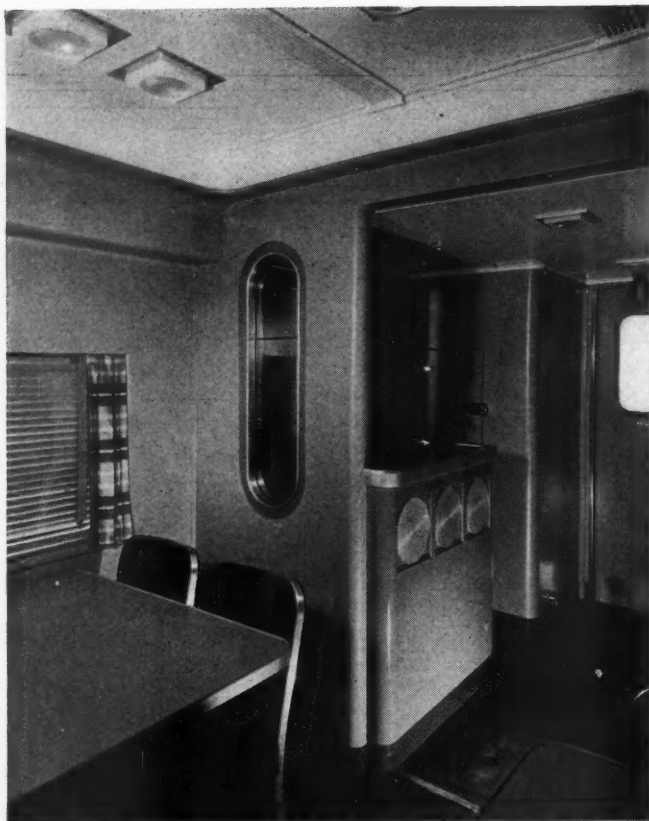
Other Structural and Operating Details

Below the stringers the floor is closed with a stainless-steel sheet welded in place. Between this and the corrugated floor is placed 2 in. of Stonefelt insulation. The corrugations of the top floor sheet are filled with cork strips and a 1-in. cork covering cemented in place. On top of this 1-in. cork is placed the finished floor—in the dining section, carpet laid on under-carpet padding; in the passageway and at the bar end, $\frac{3}{16}$ -in. antique mahogany linoleum.

The sides and roof are also insulated with Stonefelt. This material is applied in thicknesses of 3 in. in the side walls and on the sides of the roof, with 2 in. in the ends and 2 in. over the center portion of the roof. The interior lining of the cars is bonded metal. The partition frames are of welded carbon-steel tubing of rectan-

An Alcove Effect Has Been Achieved at the Ends of the Dining Room with a Dropped Ceiling, but Without Partitions





The Service Bar at the End of the Diner

gular section. The windows have double-glazed sash, with the outer plate glass and inner safety glass set in rubber. These windows are equipped with means for dehydration. On each side of the car two windows are so arranged that they can be opened from the inside of the car in case the need for an emergency exit should arise. There is also an emergency hatch through the floor in the dining room and another through the roof in the pantry.

The cars have double diaphragms, the outside diaphragm being of the hinged wing type with rubber fabric. The face plates are of stainless steel. In addition to the brackets for removable marker lamps, permanent electric marker lights are built into each end of the car.

Tight-lock couplers are used. The draft gear is of the double-acting, rubber-cushion type.

The cars are carried on double-equalizer four-wheel trucks with a nominal journal size of $5\frac{1}{2}$ in. by 10 in. They have Timken roller bearings. The side frame and bolster castings are of high-tensile alloy steel. The wheels are multi-wear rolled steel. Four Houde shock absorbers mounted on the transoms control the lateral movement of each truck bolster. Rubber inserts are placed above and below the elliptic springs, and the bolster rubbing faces are Fabreeka pads.

The cars have Westinghouse D-22-A air-brake control valves with the A-4-a relay valves. The braking ratio is 90 per cent of the light weight of the car at 36 lb. brake-cylinder pressure. In emergency, at 60 lb. cylinder pressure, the braking ratio is 150 per cent. The brake cylinders are mounted on the trucks.

Lighting and Air Conditioning

Power for lighting and air conditioning is obtained from a 20-kw. General Electric generator equipped with

Spicer drive. There are two 25-cell sets of Edison storage batteries on each car, with an aggregate capacity of 1,244 amp.hr. Lamp regulators were furnished by the Safety Car Heating & Lighting Company.

The car is air conditioned by a five-ton Frigidaire plant with the compressor and the condenser mounted under the car and the evaporator unit mounted over the ceiling at the end of the car opposite the kitchen. The Sturtevant blower is rated at 2,000 cu.ft. per min. The air duct is 40 in. wide by $7\frac{1}{2}$ in. deep and is mounted between the roof and ceiling and along the center line of the car. It is lined with acoustic panel and covered with $\frac{1}{2}$ -in. of Stonefelt. Conditioned air enters the car through continuous extruded aluminum grilles about 14 in. on each side of the center line of the ceiling.

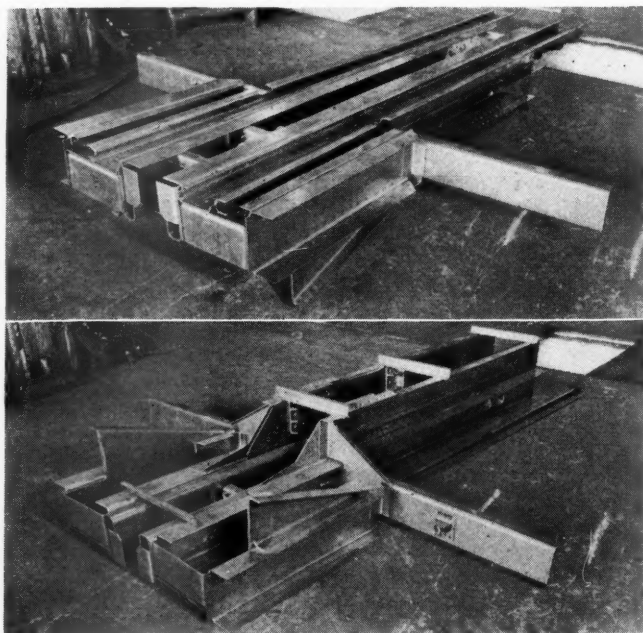
Vapor steam heat is applied, with Fulton-Sylphon thermostatic control. The floor radiators are $\frac{7}{8}$ -in. copper fin tubes. Steam is supplied from a 2-in. train line.

All steam, water, and air lines, except the air pipes on the trucks, are copper piping with sweated fittings. The air lines on the trucks are double-strength wrought iron.

Interior Arrangement

The dining room is continuous without bulkheads or grilles. At each end, however, an alcove effect has been achieved, largely by the treatment of the ceiling and by moving the side lining 1 in. into the car on each side. A change in color treatment enhances the effect.

There are six tables on each side of the car, those on one side each seating four persons. On the other side,

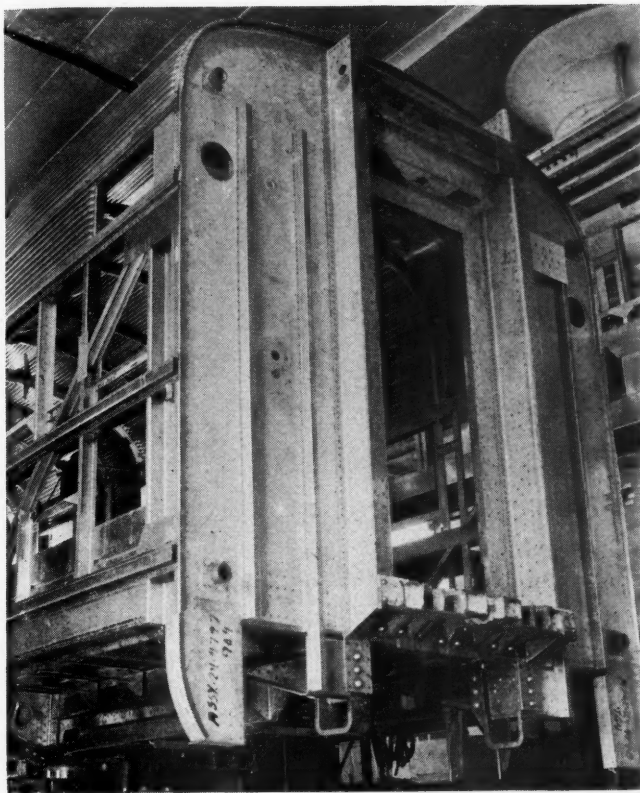


Stainless-Steel End Underframe Structure—Above: Top View;
Below: Bottom View

the tables are provided with a drop leaf and may be set up either for four places or two places each.

All of the chairs have satin-finish aluminum frames. Twelve of them are collapsible and may be stored in a locker when the drop-leaf tables are set for two places.

An unusual feature is the bar located on one side of the center corridor at the dining-room end of the car. This furnishes the steward with convenient facilities for mixing drinks without having to work in the aisle through



End Construction of Stainless-Steel Diner

which patrons are passing. The bar compartment is 56 in. long. In the bar are sinks and running water and an attractive back bar mirror for the display of glassware. It is served by a large refrigerator in the corner of the car. On the opposite side of the center passage are storage lockers and lockers for the control and lamp-regulator panels.

The lighting over the middle four pairs of tables consists of eight Luminator center-light fixtures, placed in the center of the ceiling between the air ducts, and semi-indirect continuous cove lights above the window line on each side of the car. These coves are covered on top with ribbed-glass panels and on the bottom with a light-diffusing plastic.

Over each end section of the dining room the lighting consists of nine Luminator fixtures and no indirect side lights. This part of the ceiling is separated from the middle portion of the car by a bulkhead arch immediately above the line where the side lining changes. The passageway lights are Luminator ceiling fixtures.

Architectural and Decorative Treatment of the Interior

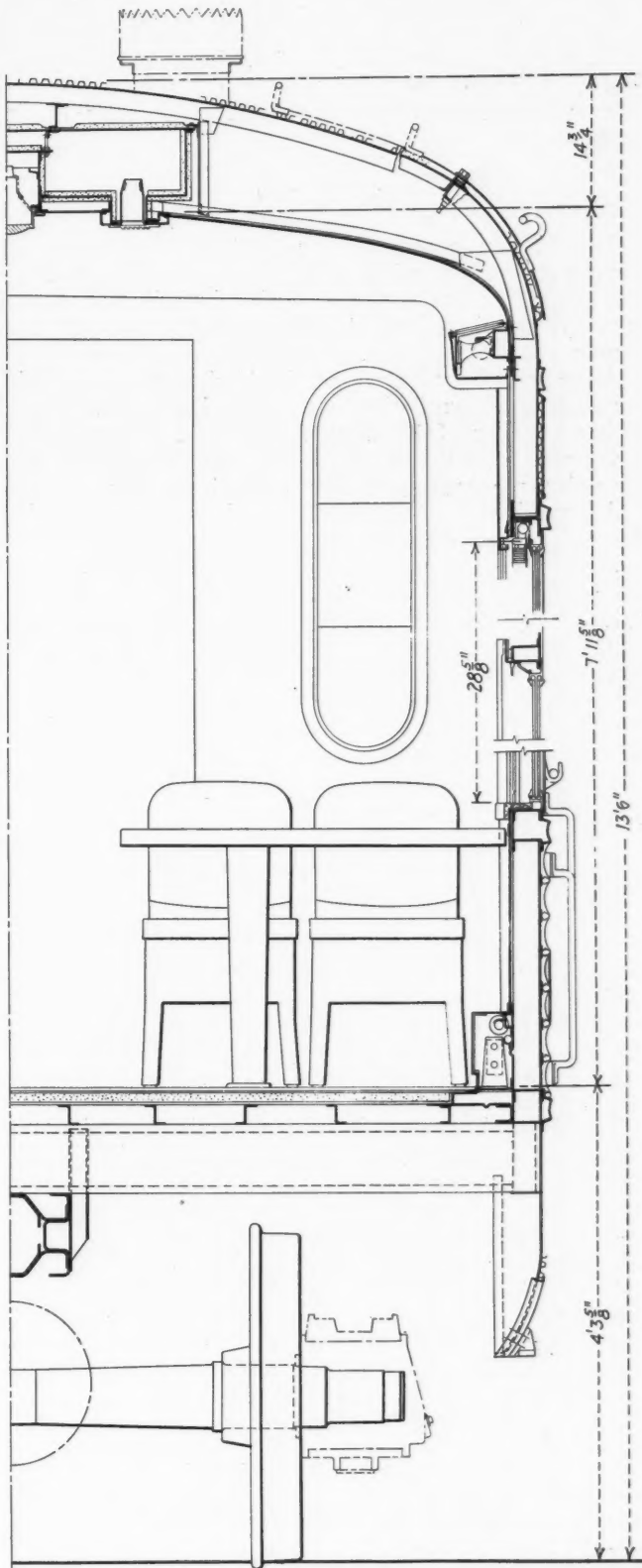
A feature of the interior design of the car is the mirror deadlight panels in the middle part of the dining room. In each of these panels is an etched pattern, with touches of gold, the theme of which is a bird characteristic of a state (including the District of Columbia) served by the Pennsylvania. The name of the bird and the state appear in a scroll under the pattern.

The prevailing colors in the dining room are mulberry and blue, with touches of red and yellow. The rug is deep mulberry with a geometrical pattern. The side walls below the windows are dark blue, as is also the upholstery on the chairs. The frieze panel is a light grayed mulberry. The side ceilings are off white and the center ceiling between the air ducts, light mulberry. Both sides of each continuous air grille are out-

lined by stripes of red. This color is repeated in a stripe on the face of the continuous window-header molding. The air outlet grilles, the face of the continuous lighting cove, and the window header moldings are Alumilite or satin-finish stainless steel.

There is a Venetian blind at each window. The slats are painted in satin-finish aluminum. The drapes at the sides of the windows have wide horizontal stripes of reddish yellow and plum.

The side and end walls of the end sections are fin-



Half Section through the Stainless-Steel Car

ished throughout in grayed mulberry. The ceiling is yellow. Upholstery on the chairs for the two tables in each end section is Dubonnet. The Venetian blinds on the end section windows are finished in grayed mulberry. The drapes are similar to those in the main dining room.

On the partitions at each end of the dining room are oblong mirrors, semi-circular at the top and bottom. In the partition between the dining room and the bar the mirror is replaced with a plate-glass window through which the steward has a clear view of the entire dining room. The window and the mirrors are framed in aluminum and outlined with a wide red stripe.

The passageways, buffet, and bar section have yellow ceilings and grayed mulberry sides. The buffet is stainless steel with red in the handle recesses. At the corridor windows are Pantasote shades with wine inside facings.

The Kitchen

The kitchen occupies a longitudinal floor space of slightly over 29 ft. at one end of the car. It is divided into two parts, one a pantry section including access to the serving table at the end of the kitchen and an enclosed pantry.

An outstanding feature of the kitchen and pantry is the system of ventilation. A motor-driven fan blower with a capacity of 1,000 cu. ft. per min. forces filtered air, drawn from the outside of the car, into the kitchen through three Anemostat fixtures in the ceiling. A second fan blower supplies 500 cu. ft. of air per min. drawn from outside through a filter to the air curtain around the pantry doorway. Air is drawn out of the kitchen by two exhaust fans, one with a capacity of 1,000 cu. ft. per min. and the other of 700 cu. ft. per min., through grilles in the hood over the range and broiler and at the back of the range, through a grille in the pantry ceiling, and from an opening at the top of the sink where dishes are washed. When the air curtain is not operating, the smaller of the two exhaust fans is designed for operation at 300 cu. ft. per min.

The fresh-air intakes for the kitchen and for the dining-room air-conditioning system are located in the letterboard panels. The air from the exhaust blowers passes through grilles on the curve of the roof above the letterboard panels.

The total water-carrying capacity of each car is 500 gallons. Four stainless-steel tanks each of 100 gallons capacity are carried below the car floor for service water and the supply for the condenser spray of the air-conditioning equipment. Overhead in the kitchen are two 50-gallon tanks, one for hot water and one for cold water.

The range in the kitchen is a coal burner which is fired with briquettes. There is an electric broilerizer which draws a maximum of 4 kw. This same power is also available for the steam table and urn when heat from the range is not available but cannot be used for the broilerizer when being used for the steam table. The total motor load in the kitchen, including the fresh-air blowers and exhaust fans, is 1.6 hp. This includes the motor on the egg boiler, the kitchen and pantry dish washers, and the electric pig for the disposal of garbage.

The Exterior

The exterior of the car is finished in the standard Pennsylvania colors. The sides are tuscan red with maroon deadlight panels, and the striping and lettering is in gold leaf. The roofs are finished in black enamel and the trucks in black truck enamel.

Partial List of Materials and Equipment on the Budd-Built Diners for the Pennsylvania

Stainless steel	Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Stainless-steel rod	Republic Steel Corp., Massillon, Ohio
Steel castings	Superior Steel Corp., Pittsburgh, Pa.
Truck frames	Rustless Iron & Steel Corp., Baltimore, Md.
Axles; wheels	Edgcomb Steel Co., Philadelphia, Pa.
Truck bearings	Treadwell Engineering Co., Easton, Pa.
Swing-hanger cross-bar bearings	General Steel Castings Corp., Eddystone, Pa.
Equalizer beams, swing hangers	Bethlehem Steel Co., Bethlehem, Pa.
Shock absorbers	The Timken Roller Bearing Company, Canton, Ohio
King pins	Link-Belt Company, Dodge Plant, Indianapolis, Ind.
Couplers, Tight-lock	The Baldwin Locomotive Works, Philadelphia, Pa.
Draft-gear cushions	Houde Engineering Corp., Buffalo, N. Y.
Elliptic springs; clasp brakes	W. H. Miner, Inc., Chicago
Air-brake equipment	National Malleable and Steel Castings Co., Cleveland, Ohio
Hand brakes	United States Rubber Co., New York
Brake shoes	J. G. Brill Co., Philadelphia, Pa.
Rubbing pads	Westinghouse Air Brake Co., Wilmerding, Pa.
Insulation—Stonefelt and Wovenstone	National Brake Co., Buffalo, N. Y.
Extruded aluminum	American Brake Shoe & Foundry Co., New York
Extruded aluminum molding	Fabreeka Products Co., Inc., Boston, Mass.
Rubber products	Johns-Manville Sales Corp., New York
Rubber diaphragms	Bohn Aluminum & Brass Corp., Detroit, Mich.
Walkway plates	Aluminum Co. of America, Pittsburgh, Pa.
Aluminum sash frames	Quaker City Rubber Co., Philadelphia, Pa.
Sash frame section	B. F. Goodrich Co., Akron, Ohio
Bonded metal interior lining	The Morton Mfg. Co., Chicago
Weather stripping	Hunter Sash Co., Inc., Flushing, L. I., N. Y.
Lock and door closers	Mitchell Specialty Co., Phila., Pa.
Cork flooring	H. H. Robertson Co., Pittsburgh, Pa.
Cork strip	Midgley & Borrowdale, Chicago
Carpet	Yale & Towne Mfg. Co., Stamford, Conn.
Velvetex under-carpet padding	John R. Livezey, Philadelphia, Pa.
Chairs	Armstrong Cork Co., Lancaster, Pa.
Upholstery	Chas. P. Cochrane, Philadelphia, Pa.
Mirrors and window glass	E. I. du Pont de Nemours & Co., Inc., Newburgh, N. Y.
Mirror etching	General Fireproofing Company, Youngstown, Ohio
Venetian blinds	L. C. Chase & Co., Inc., New York
Window curtains	Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Kitchen, pantry, bar equipment	Harrison Carved Glass Co., New York
Tanks	Michael L. Kesner Co., Chicago
Filling valves, hot and cold water....	The Pantasote Co., Inc., New York
Air-conditioning equipment	Angelo Colonna, Philadelphia, Pa.
Air filters	Standard Steel Works Co., Burnham, Pa.
Return air grilles	Westinghouse Air Brake Co., Wilmerding, Pa.
Anemostats	Frigidaire Div., General Motors Corp., Dayton, Ohio
Air grilles	Air-Maze Corporation, Cleveland, Ohio
Thermostatic control	A. H. Blaker Co., Chicago
Metallic conduit, intercar connectors.	Anemostat Corp. of America, Philadelphia, Pa.
Heating equipment	Tuttle & Bailey, Inc., New Britain, Conn.
Copper tubing	The Fulton Sylphon Co., Knoxville, Tenn.
Copper and brass fittings	Vapor Car Heating Co., Inc., Chicago
Wire and cable	The Fulton-Sylphon Co., Knoxville, Tenn.
Batteries	American Radiator Co., New York
Battery-charging receptacles	Chase Brass & Copper Co., Incorporated, Waterbury, Conn.
Circuit breakers	Anaconda Wire & Cable Co., New York
Generators	Edison Storage Battery Div., Thomas A. Edison, Inc., West Orange, N. J.
Generator drives (Spicer); lamp regulators; exhaust fans	Pyle-National Co., Chicago
Blowers	Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.
Light fixtures	General Electric Company, Schenectady, N. Y.
Kitchen lighting fixtures, trough lighting fixtures	Safety Car Heating & Lighting Co., New York
Decalcomanias	B. F. Sturtevant Co., Hyde Park, Boston, Mass.
Paint and enamels	Luminator, Inc., Chicago
	Electric Service Supplies Co., Philadelphia, Pa.
	National Decalcomania Corp., Philadelphia, Pa.
	Dolphin Paint & Varnish Co., Toledo, Ohio



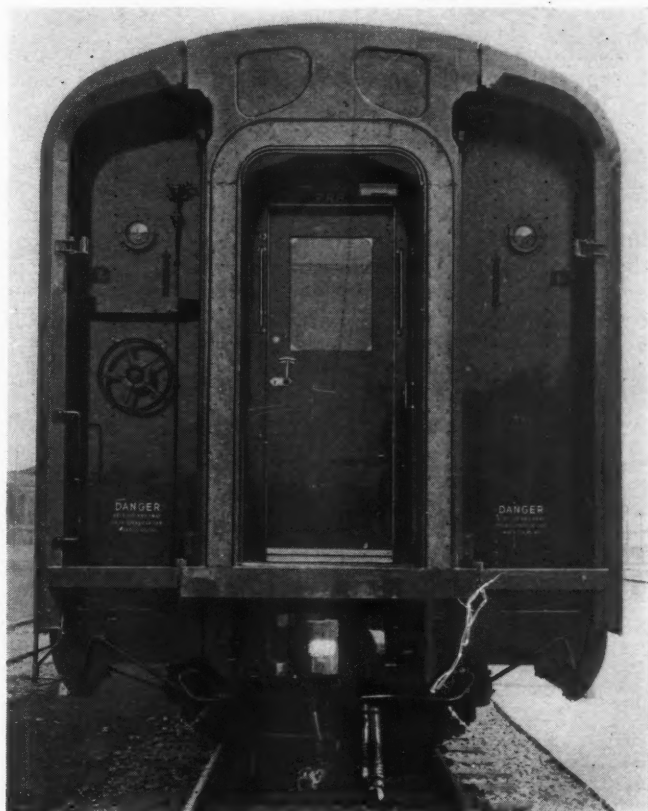
The Pullman-Built Aluminum-Alloy Dining Car

Pullman-Standard Builds Aluminum-Alloy Cars

Five modern Pennsylvania
diners made largely of
this material weigh
113,300 lb. each

THE efficient use of materials and high standards of workmanship have been built into five dining cars, recently constructed for the Pennsylvania at the Pullman plant of the Pullman-Standard Car Manufacturing Company, Chicago. The new design of diner has more or less conventional dimensions, as shown in one of the tables, but utilizes primarily aluminum-alloy construction in the car body so that the light weight of the car, on rails, is 113,300 lb. This includes 34,300 lb. for the two trucks which are equipped with Commonwealth high-tensile cast-steel frames, Timken roller bearings and Houde shock absorbers and are especially designed for easy riding.

A total length of 15 ft. 4 in. in one end of the car is devoted to a stainless steel kitchen, equipped with an insulated range, and notable for an unusually effective ventilating system. The adjoining pantry, also fully equipped, occupies a length of about 11 ft. and the buffet slightly less than 6 ft. The main dining compartment is 39 ft. long and has 48 seats, all of the tables on one side having 8-in. hinged leaves which can be dropped when the full diner capacity is not needed and thus give a much more roomy aisle. The 7-ft. section in the opposite end of the car from the kitchen contains a refrigerator and small serving bar on one side of the aisle and lockers and air-conditioning control panels on the other. The familiar Pennsylvania color scheme is used on the



End of One of the Pennsylvania Diners

exterior, consisting of Tuscan red with gold striping and lettering, the window panels being treated as a unit on each side and painted maroon.

Interior Decorative Treatment

A feature of the interior construction from an architectural standpoint is an all-welded aluminum ceiling of pleasing contour which is rounded slightly where it joins

the side walls and extends in one continuous section, without break, throughout the length of the dining compartment. The ceiling is finished predominantly in white with the center air duct painted a light green and designed to support the attractive Luminator ceiling-light fixtures. Air delivery deflectors on each side of the center duct are satin-finished aluminum, edged in Burgundy. Indirect lighting equipment, furnished by Electric Service Supplies, is installed in an aluminum-finish trough on each side wall just above the window level.

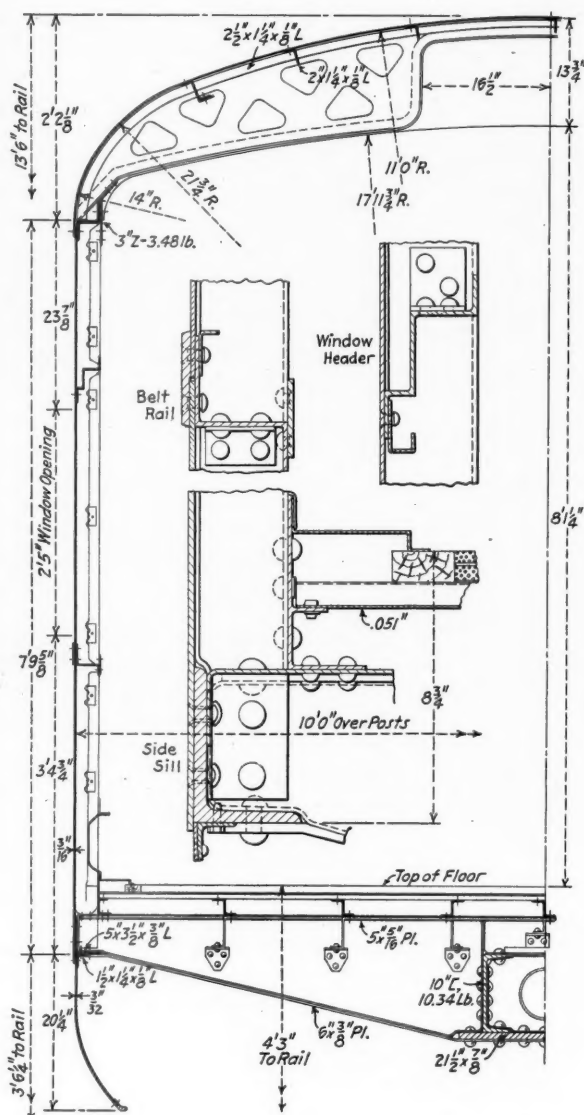
Frieze panels are painted gray. The pier panels are clear mirrors, decorated with signs of the Zodiac, acid etched and colored in gold. The window drapes have a horizontal line pattern composed of Burgundy, gold, egg shell, and coral striping. Dodge-type Venetian blinds are made of satin-finish polished stainless steel. The floor covering is a modified modern fret design two-tone Burgundy.

End bulkheads in the car are painted green, slightly darker than the center ceiling and have large decorative mirrors on either side of each doorway. These mirrors are edged in Burgundy. The tables are aluminum, including the legs. The chairs are satin-finished aluminum, upholstered in blue-green needlepoint. Additional aluminum folding chairs are available when it is necessary to raise the table drop leaves and utilize the full seating capacity of 48 in the dining compartment.

Principal Features of the Construction

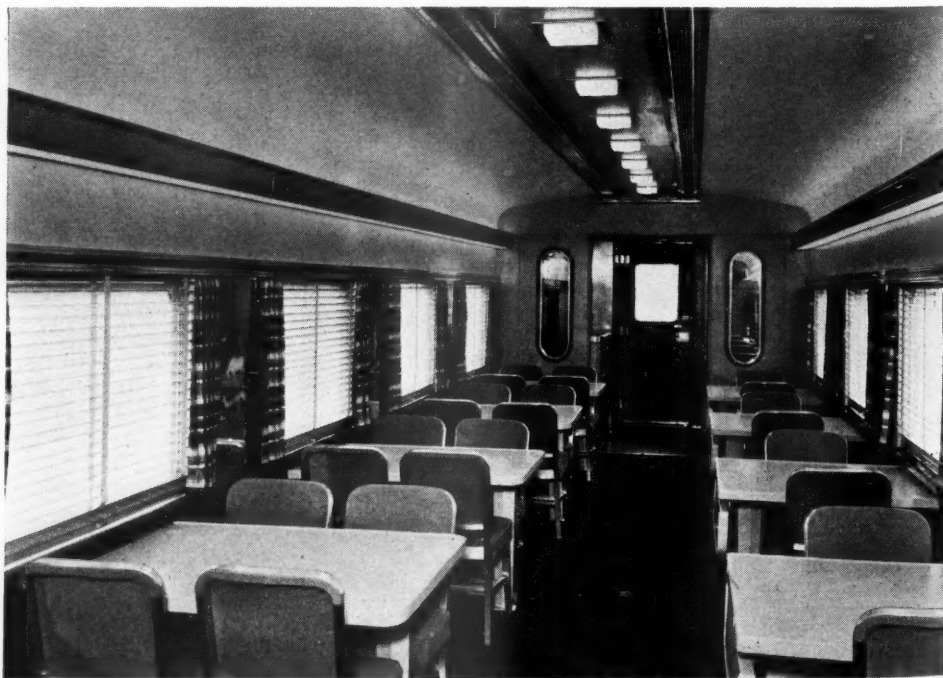
Aluminum alloys are used in all framing of the car, except the bolsters, end sills and draft sills, which are constructed of low-alloy high-tensile steel, and in part of cast steel. The underframe consists of a center sill with draft sills, longitudinal floor stringers, sub-floor sheet, crossbearers, bolsters and end sills.

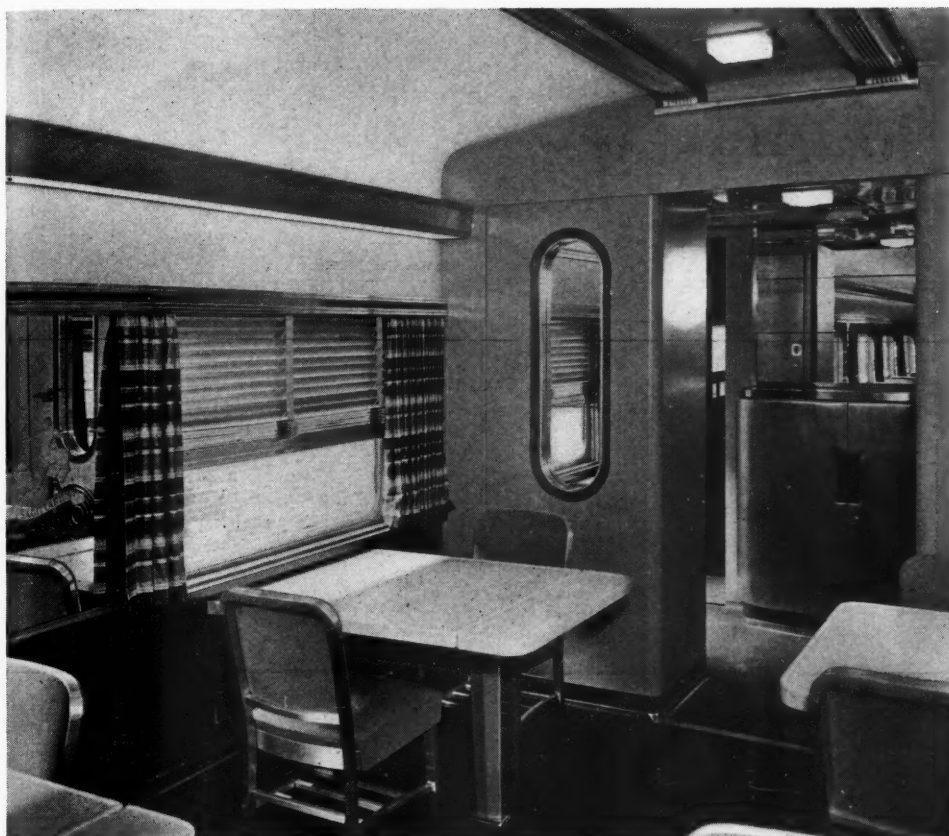
The center sill is composed of two rolled 10-in. structural channels of aluminum alloy 17-S-T, tied together throughout their length by means of a riveted bottom cover plate. By this construction of the center sills, eccentricity of buff under normal operation of the car is avoided and the sill is still located high enough to give ample clearance for the generator drive. The aluminum



Half-Section Through the Aluminum-Alloy Structure

The Tables on One Side of the Diner Have Hinged Drop Leaves





A Corner of the Dining Room
Showing the Buffet Through the
Passageway

center sill is joined to the steel draft sills at each end of the car just outside the bolster, where it is securely riveted to cast-steel draft lugs and built-up Cor-Ten draft sills which extend to the respective end sills.

The end sills are each composed of a central cast-steel portion, from which arc-welded built-up alloy-steel members extend to the side sills. The end-sill casting is designed to form a secure tie between the parts of the draft sill, attached to it by means of arc welding, and the body end post extensions which are also welded to the end-sill casting. It also has means for carrying the

brackets to the end sill. Corner posts are attached to the gusset tying the corner posts, end sill and side sill. Diaphragm and end posts are attached to the roof at the top, the roof being reinforced to carry the reactions of the posts due to bending.

Each car body bolster is of the double-web type, constructed of rolled high-tensile-steel webs and cover plates, joined together by arc welding. Its connections at the center sill and side sills are riveted. A cast-steel center filler is provided at each bolster, serving as a housing for the body-locking pin and it has attached to it the body center plate.

Each crossbearer consists of three pressed 17-S-T pans with top and bottom cover plates riveted to them, thus forming in effect a girder between the side sills of the car of sufficient strength and stiffness to carry its portion of the underframe and floor loads and to have a stabilizing effect on the center sill.

The side frames are of the girder type, designed to carry all dead and live loads on the car. Their stiffness is sufficient to receive center-sill reactions due to a 900,000-lb. load applied at the draft-gear back stops with a deflection not to exceed .8 in. between bolsters. An interesting feature of these side frames is that the side sheets are secured to the framing members by means of countersunk aluminum A-17-S-T rivets.

The roof is constructed of aluminum-alloy roof sheets and carlines. The flooring is $1\frac{3}{16}$ -in. deep corrugated aluminum flooring, filled with cork and covered by a 1-in. thick laminated cork board with a $\frac{3}{8}$ -in. hard cork upper course.

How the Insulation is Applied

Insulation throughout the car is Fiberglas, bound on both sides with asbestos paper. Sides, ends and roof have insulation 3 in. thick; the floor has 2 in. of insulation applied between the sub-floor and the corrugated

General Dimensions of Pennsylvania Diners Built by Pullman-Standard

Length, overall coupled, ft.-in.	84- 6
Length, between truck centers, ft.-in.	59- 6
Width, over side posts, ft.-in.	10- 0
Width, between wainscoting, ft.-in.	9- 4
Height, rail to top of carline, ft.-in.	13- 6
Height, rail to top of floor, ft.-in.	4- 3
Height, rail to top of platform, ft.-in.	4- 2
Height, rail to center line coupler, ft.-in.	2-10½
Ceiling, height in dining room at center, ft.-in.	8- 1
Light weight of car on rails, lb.	113,300
Weight of two four-wheel trucks, lb.	35,440

coupler and steam pipe and forms the housings for diaphragm face-plate side-stem springs. This end sill casting also incorporates an anti-climb arrangement.

The diaphragm posts are 9 in. by $6\frac{1}{2}$ in. H-sections, reinforced at the bottom. The intermediate posts are 3-in. Z-sections. Corner posts are 5-in. channels with re-entrant flanges. The diaphragm posts are attached to the end-sill castings as previously mentioned by post reinforcements which are welded to the end sill and extend about 3 ft. above it. Intermediate posts are attached by

flooring. All posts and carlines of a closed or partly closed section are packed with insulation. The air ducts are insulated on the outside by Stonefelt 1 in. thick, and on the inside by $\frac{1}{2}$ in. of acoustical fireproof insulation.

The car is equipped with combined draft-gear and buffer at each end consisting of a balanced twin group of Waugh rubber mats. Each group has six Waughmats and six separators. The couplers are of the National tight-lock type. The coupler and coupler yoke are made of high-tensile cast steel. The end enclosure consists of the Pullman inner and outer diaphragm arrangement with vertical rubber-mounted stayrods and upper helical spring and lateral rods to minimize noises. At the platform the face plate is backed by two side stems with helical springs.

Window sash in the dining room consists of Pittsburgh aluminum dehydrated double-glazed units, the inside being laminated safety glass and the outside polished plate glass. Windows in the kitchen passageway, in the kitchen and pantry are equipped with Adams & Westlake aluminum sash with single laminated safety glass.

Air-conditioning is supplied by the General Electric mechanical system, 5-ton capacity, overhead unit type with Sylphon temperature control, in combination with the Fulton Sylphon system of thermostatically controlled heaters. Copper fin-tube radiation is used for floor heating and for the overhead heating coil in connection with the air-conditioning system.

The car is equipped with a Safety 20-kw. body-hung generator with Spicer drive and safety clutch, also two

by the use of a Stack No. 60 hot-water heater to supply the sinks in the kitchen, pantry and bar. Throughout the kitchen and pantry interiors special care has been taken in the preparation of the designs to produce the most efficient arrangement of facilities and the most pleasing appearance. Important improvements in design for sanitary and safety conditions also have been incorporated.



Looking Toward the Serving Counter in the Kitchen

25-cell sets of Edison storage batteries with a combined capacity of 1,244 amp.-hr. Air-brake equipment is Westinghouse with D-22-A control valve and A-4-A relay valve.

An air-pressure water system of 450-gal. capacity is installed, an ample supply of hot water being secured



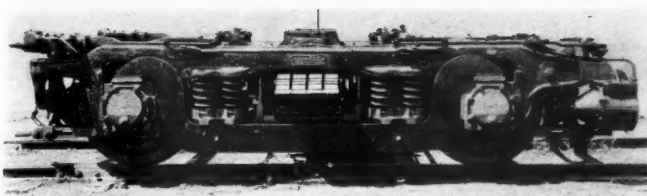
The Pantry—Looking Toward the Serving Counter at the End of the Kitchen

The floor is welded as a unit construction as a precaution against leakage, the only openings through this unit being for drainage purposes.

Method of Ventilating the Kitchen and Pantry

In ventilating the kitchen and pantry, fresh air is supplied to the latter through vertical outlet slots on either side of the entrance from the lobby to the pantry. This air is drawn by a blower-type fan from outside the car, filtered and then delivered to the pantry. An additional blower supplies air, drawn from outside the car, to the kitchen through three distributing louvers in the ceiling. One exhaust duct is carried over the kitchen and pantry ceiling, drawing air from two outlets in the pantry, from a canopy over the range and from two outlets in the back of the range just above the range top. This air is discharged outside the roof at the kitchen end by a propeller-type fan.

An added exhaust fan draws air from the kitchen sink to carry away the vapor from the high-temperature dish water. The sides of the sinks near the tops are perforated and connected to a duct extending up to the propeller-type exhaust fan under the roof. The dish water is kept around 180 deg., resulting in considerable



The Four-Wheel Truck Has a 9-Ft. Wheel Base

water vapor rising from the sink which it is desirable to exhaust.

Trucks Designed for Easy Riding

The four-wheel, high-tensile cast-steel trucks have a wheel base of 9 ft., and a wheel diameter of 36 in., and are especially designed for easy riding at high speeds. They are of the double-equalizer, swing-hanger type and are equipped with Simplex unit-cylinder clasp brakes, Houde shock absorbers and have flat friction type side bearings. The journal bearings are Timken roller bearings for 5½-in. by 10-in. journals.

Partial List of Materials and Equipment on Diners Built by the Pullman-Standard Car Manufacturing Company for the Pennsylvania

Aluminum alloys	Aluminum Co. of America, Pittsburgh, Pa.
Alloy steel	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Truck castings; end sills and draft-gear housing castings	General Steel Castings Corp., Eddystone, Pa.
Wheels and axles	Bethlehem Steel Co., Bethlehem, Pa.
Couplers and drawbar yokes	National Malleable & Steel Castings Co., Cleveland, Ohio
Draft-gear rubber mats	Waugh Equipment Co., New York
Roller bearings and boxes	The Timken Roller Bearing Co., Canton, Ohio
Clasp brakes	American Steel Foundries, Chicago
Diaphragms:	
Rubber	United States Rubber Co., New York
Canvas	Goodyear Products Corp., New York
Hand brakes	National Brake Co., Buffalo, N. Y.
Air-brake equipment	Westinghouse Air Brake Co., Wilmerding, Pa.
Insulation	Gustin-Bacon Mfg. Co., Kansas City, Mo.
Flooring:	
Laminated cork	Armstrong Cork Co., Lancaster, Pa.
Stainless steel (kitchen and pantry); tread plates	Alan Wood Steel Co., Conshohocken, Pa.
Window sash and glass	Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Window sash (kitchen and pantry) ..	The Adams & Westlake Co., Elkhart, Ind.
Air-conditioning system	General Electric Co., Schenectady, N. Y.
Blowers for air curtain in pantry	F. F. Sturtevant Co., Hyde Park, Boston, Mass.
Heating system control	The Fulton-Sylphon Co., Knoxville, Tenn.
Metallic steam-heat connectors	Barco Manufacturing Co., Chicago
Batteries	Johnson Storage Battery Div., Thomas Edison, Inc., West Orange, N. J.
Axle-generator equipment	General Electric Co., Schenectady, N. Y.
Axle-generator drive (Spicer)	Safety Car Heating & Lighting Co., New York
Lighting fixtures:	
Ceiling type	Luminator, Inc., Chicago
Trough type	Electric Service Supplies Co., Philadelphia, Pa.
Kitchen and pantry	Dayton Mfg. Co., Dayton, Ohio
Marker	The Pyle-National Co., Chicago
Kitchen, pantry, buffet and bar equipment	The John Van Range Co., Cincinnati, Ohio
Disposal unit (electric pig)	General Electric Co., Schenectady, N. Y.
Dining chairs	General Fireproofing Co., Youngstown, Ohio
Dining tables	Pullman-Standard Car Mfg. Co., Chicago

Venetian blinds	H. B. Dodge & Company, Chicago
Carpet	A. & M. Karagheusian, Inc., New York
Draperies	J. Schumacher & Co., New York
Etched mirrors	Marriton Carved Glass Co., New York
End door locks	J. L. Howard & Co., Hartford, Conn.
Paints:	
Exterior	E. I. du Pont de Nemours & Co., Wilmington, Del.
Interior	Murphy Varnish Co., Newark, N. J.

A. A. R. Arms High School Debaters

THE first round of ammunition in a big country-wide discussion has been supplied contestants. The Association of American Railroads, on September 18, completed the mailing of 53,500 copies of its manual for the use of high-school debaters taking the "nay" side of the subject selected for debate in secondary school forensic leagues throughout the country during the 1939-1940 school year: "Resolved, That the federal government should own and operate the railroads."

Inasmuch as this subject was selected by the Committee on Debate Materials and Interstate Co-operation of the National University Extension Association, it was expected that a large proportion of the country's four million-odd high school students will participate in or hear debates on the subject. The railroads and the A. A. R. were, therefore, faced with a bombardment of requests for material, many of which would be duplicates, making for waste and inefficiency. Thus, for example, it is known that high-schoolers have a habit of addressing similar inquiries and requests to many railroads and railroad organizations simultaneously. It is also probable that schools and teachers will ask for group lots of printed information for distribution to debaters, unaware that many of the students have already made requests on their own account.

To co-ordinate distribution of the manual and prevent duplication, the following plan was worked out and explained to all public relations representatives in a memorandum from Robert S. Henry, public relations assistant to the A. A. R. president. The Association is mailing copies of the manual direct to the following groups in Western and Southern territories: (1) public, high school, college and technical libraries; (2) heads of high schools and colleges; and (3) state, city and county school officials. An initial distribution of 27,000 copies has already been made in this classification. The Committee on Public Relations of the Eastern Railroads is making a similar distribution in Eastern territory; 16,500 were sent out in the initial distribution. The National University Extension Association has sent sample copies to the heads of state high school debate leagues who, in turn, may order sufficient copies to supply one each to debaters and coaches. Preliminary estimates indicate that a total of about 10,000 copies will be required for this purpose.

For supplemental distribution adequate supplies of the manual will be furnished to individual carriers and the Eastern and Western public relations committees. These may be issued to key railroad officers and employees, editors, educators and other interested parties.

In order to avoid duplication with the initial distribution, the A. A. R. has suggested that the following method of handling direct inquiries be adopted: (1) Re-

(Continued on page 491)

Roadmasters Discuss Problems at Chicago Meeting

In intensive three-day session, they prepare to cope with increased demands—View interesting exhibit of track materials and equipment*

Part I



On the Bessemer & Lake Erie in Pennsylvania

AWARE that the days immediately ahead may bring to its members problems far more difficult than those which have been considered difficult during the last eight or ten years, the Roadmasters and Maintenance of Way Association held its fifty-fourth annual convention at the Hotel Stevens in Chicago on September 19-21, with an intensive program. Owing to the added responsibilities already being placed on these men as the result of the large increases in freight traffic during the last few weeks, many of them found it impossible to attend the convention, but, in spite of this, approximately 300 railway officers were present at the

various sessions, with a total attendance, including exhibitors, of more than 600.

The program, which was one of the most constructive in the history of the association, was geared especially to meet the demands for safe, smooth-riding and economically-maintained track under present-day high-speed train operation and the prospects of increased traffic and still higher speeds in the future. It included reports by committees on Anchoring Track to Meet Present-Day Conditions; Heaving Track—Its Causes, Control and Maintenance; The Maintenance of Curves for High-Speed Trains; The Qualifications and Duties of a Roadmaster; The Utilization of Roadway Machines; and Specialized Versus Section Gangs. In addition, the convention was addressed by C. E. Johnston, chairman, Western Association of Railway Executives, who welcomed the roadmasters to Chicago; by R. H. Smith, vice-president and general manager, Norfolk & Western, who discussed the safety problems and responsibilities of maintenance of way men; by W. H. Hillis, engineer maintenance of way, Chicago, Rock Island & Pacific, on High-Speed Trains and Track Maintenance; and by C. B. Bronson, inspecting engineer, New York Central System, on Recent Trends in Rail Manufacture and Maintenance, and Their Effects on Track Work. Abstracts of the addresses by Messrs. Johnston and Smith, and the reports of three committees follow. Abstracts of the other addresses and reports will appear in the issue for next week.

Special features of the meeting included an evening of motion pictures on Tuesday, at which were shown the locomotive slip test films taken by the Chicago, Burlington & Quincy, showing the effect on track of locomotives operated at excessively high speeds, which were presented with comments by H. R. Clarke, engineer maintenance of way of that road; a banquet on Wednesday night, tendered to members of the association and their families by the Track Supply Association, which was attended by 481 persons; and a Question Box session on Wednesday, at which many practical questions concerning modern track maintenance were submitted and discussed. Still another feature of the program was a visit to the plant of the Inland Steel Company at Indiana Harbor, Ind., on Thursday afternoon, where members had an opportunity to observe the manufacture of a variety of track fastenings, including bolts, spikes and tie plates. All sessions of the convention were presided over by F. B. La Fleur, roadmaster on the Louisiana lines of the Southern Pacific, and president of the association.

Coincident with the convention, and of large practical value to those in attendance, forty-five members of the Track Supply Association, manufacturers of materials and equipment employed in track construction and main-

* A list of the companies participating in this exhibit, showing the names of their representatives and the products on display, appears in the news pages of this issue.

tenance, presented an exhibit of their products. This exhibit, which was the twenty-fifth such exhibit held in conjunction with conventions of the Roadmasters Association, was held in the exhibition hall of the hotel, directly adjacent to the meeting room of the convention.

At the closing session of the convention on Thursday, G. L. Sitton, chief engineer maintenance of way and structures, Southern, at Charlotte, N. C., was advanced from vice-president to president; J. J. Clutz, acting assistant division engineer, Pennsylvania, Jersey City, N. J., and a director of the association, was elected first vice-president; A. B. Hillman, roadmaster, Belt Railway of Chicago, Chicago, was elected second vice-president; and C. A. Lichty, Chicago, and E. E. Crowley, roadmaster, Delaware & Hudson, Albany, N. Y., were re-elected, respectively, secretary and treasurer. Three new directors were elected—E. J. Brown, district engineer maintenance of way, Chicago, Burlington & Quincy, Galesburg, Ill.; H. E. Kirby, assistant engineer, Chesapeake & Ohio, Richmond, Va.; and J. M. Miller, division engineer, Western Maryland, Cumberland, Md.

The secretary's report showed more than 500 members of the association in good standing, with 116 new members taken in during the year. Chicago was selected as the convention city for 1940.

C. E. Johnston Opens Convention

C. E. Johnston, chairman of the Western Association of Railway Executives, welcomed the convention to Chicago and commended the roadmasters for their outstanding achievements during the last few years in the face of adversity. At the same time, he admonished them to get the most out of their convention, to fortify themselves against the strenuous days which he predicted lay immediately ahead.

"This is a very important meeting of important representatives of an important railroad department," he said. "The railroad industry should be benefited greatly by this gathering, and you men, as individuals, should gain a great deal through your contacts here and through the discussions of the many complex and serious problems confronting us in maintenance of way work.

"There is no class of men in railroad service that deserves more credit for good work performed during the last few years, and in the face of adversity, than you maintenance of way men. I am sorry that it is not possible for me to say that the most strenuous period has passed and that from now on less pressure will be put upon you. That would certainly be good news for all, but I am afraid that the situation quite to the contrary will be the case. I believe we are all well on our way towards difficulties, the like of which we have not fully experienced to the present time."

With regard to the problems confronting the railways, Mr. Johnston spoke of the many changes taking place in railroad operation and maintenance as the result of the competition of other forms of transportation, and of the heavy taxes with which the railways are burdened as compared with their competitors, and told the roadmasters that the executives of their roads are leaning heavily upon them to assist them in meeting these problems. Then, turning to the matter of safety, he said that both he and they well knew how paramount safety is in railroad operation. "Regardless of what takes place on the highways," he said, "the railroads can never afford to relax for a moment in their drive for safety on the rails. Over a long period of years the words 'railroads' and 'safety' have been synonymous in the eyes of the public and they should never be otherwise."

Closing his remarks, Mr. Johnston reiterated—"Roadmasters and other maintenance of way men have played and will continue to play a very necessary and important part in railroad operation; we must look to you men to preserve and protect the present high standards of railroad safety. By reason of your training and experience you are qualified and may be relied upon to meet almost any emergency arising that would affect the physical property of the railroads, and can be most helpful to the executives of your companies in the important work of improving relations between the railways and the public."

Others Extend Greetings

Greetings from the American Railway Engineering Association were extended to the convention by E. M. Hastings, its president, and chief engineer of the Richmond, Fredericksburg & Potomac, who commended the roadmasters for the work of their association through the more than fifty years of its existence which, he said, had "constantly forged new links in the chain of progress which has been made by the railroads."

"It is particularly interesting," he commented, "to read the fine contributions that you have been making in these days of intensive maintenance work to meet the ever-increasing problems placed upon maintenance of way men because of higher speeds and more exacting service. The field is yet very challenging; we have not accomplished anywhere near the work that can be done; there are many problems yet to be solved and in the solution of these problems, hard work and careful thought are necessary on the part of each member of your association."

"I feel certain," he continued, "that with the fine history that is behind your organization, you feel challenged and impelled to look to the accomplishment of better things in the days ahead. If we who are concerned with the maintenance of the American railways live up to what is expected of us, we need to give the very best that we have, and to work with untiring effort towards the betterment of our maintenance practices and the improvement of our service to our railways. The interests of each of our railways are common interests, and our problems must be solved, our work done, and our standards set for the accomplishment of those things that are of the greatest benefit to all."

Armstrong Chinn, chief engineer of the Alton, and president of the American Railway Bridge and Building Association, brought greetings from that association, and told the roadmasters that, as in the past, their companies and the nation are depending upon them to maintain to a high standard the roadways and tracks of the country's most essential and dependable form of transportation.

"Our associations," he said, "organized and working along similar lines, are doing a splendid work in advancing the science of practical railroad maintenance. During the last decade, which has probably been the most strenuous and difficult period in the history of American railroading, the members of our associations have, with less money than ever before, produced and maintained tracks and structures on which traffic has moved safely and comfortably at the highest scheduled speeds in railroad history. This is an accomplishment of which we can well be proud. It has been made possible by careful planning and supervision and the constant investigation of current problems such as your committees have been studying during the last year. While there are many forms of transportation, none have yet equalled the railroads in low cost, freedom of movement or dependability. You have a great responsibility to your companies, to your

nation and to its people to continue to provide and maintain the roadway and tracks required for this cheap and essential form of transportation. Knowing you as I do, I know you will not fail."

Speaking in behalf of the Track Supply Association, Lem Adams, its president, and vice-president of the Oxweld Railroad Service Company, congratulated the roadmasters upon their long record of achievement and extended to them an invitation to visit the twenty-fifth annual exhibit of maintenance of way equipment and materials held in conjunction with the convention. This exhibit, he pointed out, is presented for their benefit. "The representatives of the supply companies exhibiting are here," he said, "to be of assistance in the effective use of their products in the solution of your problems."

In his annual address, President L. B. La Fleur spoke of the accomplishments of the association during the year, urged active participation in the discussion of all reports, and stressed the value of the association to maintenance of way men in the solution of their many and ever-increasing problems. "The Roadmasters and Maintenance of Way Association," he said, "has long been doing outstanding work among practical maintenance officers. It stands high in the esteem of railway managements by reason of more than 54 years of conscientious concentration on methods of track maintenance. Now, more than ever before, it is necessary for roadmasters to prove to their managements that they are getting the most in results for every dollar they spend for labor and material. It is from these men that the managements will secure many of their maintenance officers in the future."

Safety Can Be Achieved

R. H. Smith, vice-president and general manager of the Norfolk & Western, addressed the roadmasters on Tuesday afternoon on the practice of safety in maintenance of way work, and, while by statistics he showed them that they had contributed largely to the enviable record in the reduction in the number of accidents among maintenance of way employees, he admonished them never to be satisfied with their safety record, no matter how good it might be. He spoke in part, as follows:

Last year there were 15,470 personal injury casualties among all railroad employees in the United States, and 3,602, or 23 per cent of these were among the maintenance of way forces. The casualty rate for all railroad employees was 6.86 per million man-hours, while for maintenance of way workers alone the rate was 8.11, or 18 per cent greater. Obviously, therefore, the prevention of maintenance of way accidents is a matter of importance.

The railway with which I am connected is proud of the fact that twice in the last 13 years it has been awarded the Harriman medal for the most outstanding safety record among the Class I railroads of the country for the greatest progress in accident prevention. A substantial help in effecting those enviable records has been a large reduction in accidental injuries to maintenance of way men.

The Interstate Commerce Commission did not start keeping a separate record of injuries to railway employees by occupations until 1924. In that year the casualty rate among maintenance of way employees on the N. & W. was 26.7 per million man-hours worked. The rate for all Class I roads in that year was 27.5, approximately the same. Steadily and consistently we have lowered our rate, until in 1938 it was 3.71, 54 per cent better than

the national rate of 8.11 for that year, and 86 per cent better than our own rate in 1924.

How was this improvement accomplished? By doing two things—by building up safety morale and by attacking accidents at the roots of their causes. As maintenance of way employees are widely scattered, safety educational work among them is difficult. While the aggregate danger to them is perhaps no greater than that to other employees, the hazards to which they are exposed are more varied and more numerous. They do all kinds of work, in all kinds of places. For these and other reasons, the prevention of maintenance of way accidents requires the application of an unusual amount of interest, energy and ingenuity. Fortunately, you can always find these three qualities in maintenance of way supervisory officers.

The first man whom we attempted to interest in safety on the N. & W. was the foreman. He is almost continuously with his men, actively directing their work. On his attitude and interest we realized, depended whether the work would be done safely. So we concentrated our educational efforts first on him. His response was gratifying.

We recognize in a suitable way foremen who bring their gangs through one, two, three or more years without lost-time injuries to any members of their gangs. On the first day of each year every foreman puts a large sign on his tool house or tool car reading "No Accidents This Year." This stays there until an injury to a member of the gang breaks the record. It is a "flag" of the safety cause that no foreman wants to lower. We convinced the foreman that the management was sincere in its admonition to do every job the safe way, even though it took him a little longer. And when we had him really sold on the idea that safe work was good work, and really interested in competing with his fellow foremen for good safety records, the morale of the "army" was established. Morale is just as much a help in winning a battle against accidents as it is in winning any other kind of battle.

Next came the attack on the accidents themselves. This attack was made on the roots of the causes from which accidents grow. It was first planned by a patient and thorough analysis of each individual accident to determine how it happened and its causes. The accidents were then classified by their causes and a determined drive was made on those causes, starting first with those which were producing the most accidents. Maybe the cause was an improper tool or machine or some other condition. Maybe it was an improper or careless practice. Perhaps, and often times, it was a combination of both. But whatever it was, we diagnosed it and then tried to correct it. It took patience and persistence, but the results speak for themselves.

On the average railroad, the handling of rail causes, or at least used to cause, more accidents in the maintenance of way department than any other one operation. There were 120 injuries from this cause on the railways in 1924. In 1938, there were only 3 from this cause, a reduction of 98 per cent. The average rail in 1938 was of larger section and longer and heavier than the rail handled in 1924. The difference in the number of accidents was the result of better rail-handling equipment and more intelligent care in the work. The next most prolific cause of injuries on our railroad in 1924 was in the handling of ties. In that year we had 99 accidents from this cause, resulting in mashed or broken fingers and toes, and broken arms or legs. In 1938 we did not have a single injury from this cause.

Like many other roads, starting about 25 years ago, we began to equip all maintenance of way gangs with

motor cars. These cars promptly became an outstanding cause of injuries to employees. In one year we had 8 employees killed and 97 injured in motor car accidents. Last year we had only 6 injuries from this cause, a reduction of 94 per cent, and only 3 of these occurred in motor car collisions or derailments, the other 3 occurring during the handling of cars on or off the track. The improvement in the record was the result of the adoption and enforcement of sensible rules governing motor car operation, and the improvement of those features of the motor car which contributed to accidents.

We used to have frequent injuries to men caused by slivers of steel flying from rail, chisels, bolt heads or striking hammers. One year we had 13 such accidents, injuring men to such an extent that they lost more than 3 day's time, including 6 men who lost eyes. We called on the manufacturers to produce a better chisel, kept test records of various ones and bought only those which gave satisfactory performance, even though they cost more. Furthermore, we provided every maintenance of way gang with a simple emery grindstone and required that they keep the heads dressed on their chisels, spike mauls and other tools against mushrooming. As a result, instead of 13 injuries last year, with 6 eye losses, we had only 1 comparatively minor accident.

I am a believer in a definite set of printed safety rules. Many years ago I sponsored, and our road adopted, a printed booklet containing the more important safety rules and instructions, a copy of which was put in the hands of every employee. I am sure that we have secured substantial results in increased safety from the adoption of these codified safety rules.

No matter how good a safety record you make, never be satisfied with it. Let each new record be a starting place from which to build a better one. In 1926, when our road was first awarded the Harriman medal, we had 1,439 accidents, with a casualty rate of 18.49. It was the best record we had had and at the time we were proud of it, but we weren't satisfied. It wasn't good enough. Steadily through the ensuing years that record was improved until last year, in comparison with 1926, the total number of accidents was reduced from 1,439 to 150, or more than 89 per cent, and the casualty rate was reduced from 18.49 to 3.95, an improvement of more than 78 per cent.

This same improvement can and is being made on practically every other railroad in the country, and is one of those things about which the American railroads are justly proud.

Maintenance of Curves for High Speeds

A committee of which C. W. Baldridge, assistant engineer, Atchison, Topeka & Santa Fe, was chairman, presented in considerable detail the reasons why curves are a limiting factor in high-speed train operation, showing that both the kinetic energy developed by a train in motion and the centrifugal force acting upon it while it is passing around a curve increase directly as the square of the speed, these forces being in the ratio of one, four and nine for speeds of 30, 60 and 90 miles an hour respectively. The committee stated that since a considerable part of these forces are transmitted to the track, it becomes necessary to use much greater care in the maintenance of all elements of the track structure for high speeds than for the lower speeds. In this regard it pointed out that the factors which require special attention are alinement, superelevation, surface and gage of the track, the replacement of and spacing of ties where

needed, the condition of the rail, the maintenance and trim of the ballast, and drainage.

The very great increase in the centrifugal force as the speed increases has two effects, the report pointed out—the movement of the track out of line, first at spots where the superelevation is faulty, and second, where the ballast support is weak. Commenting on these effects, the committee called attention to the fact that high speeds for trains will not permit half-way or makeshift maintenance measures. Emphasis was also laid on the fact that to insure smooth riding, it is essential that the centerline of the curve be staked out with as much accuracy as possible.

Five methods of setting stakes for curve alinement were mentioned in the report, but the committee's discussion centered around stringlining and the use of the transit. In this respect, it took issue with those who claim that the stringlining method is more accurate than the transit method and that it offers great advantage over other methods in the compounding of curves to keep the throw of the track to the minimum. In fact it criticized the compounding produced by stringlining, stating that "the compounds are usually small, but so are the irregularities which are so detrimental to good-riding track on curves." Continuing, it said, "The ease of compounding is, in fact, a detriment rather than an advantage because, for high speeds, real accuracy of alinement is necessary. A good transit and a steel tape should be used for setting center stakes on curves in high-speed track, and they should be handled by experienced engineers. Roadmasters and trackmen have trouble enough of their own without burdening them with work which someone else should do."

Commenting upon the wide difference in speed between slow freight trains and fast passenger trains, and the varying and uneven loads which this throws on the two rails on curves, the committee said that some maintenance officers have advocated that there should be a difference of not more than 15 miles an hour in the speed allowed between the fastest and the slowest trains. However, it called attention to the fact that many high-speed passenger trains are now operating over long stretches at speeds of 80 to 100 miles an hour, and expressed the opinion that no freight train should attempt to duplicate these speeds within 15 miles an hour. Because of the unequal distribution of the load between the high and the low rails on curves, the committee emphasized the importance of keeping the track in as nearly perfect surface as is possible, adding, that failure to do so will result in an excessive load being placed on one rail with the tendency to lower it, thus altering both the surface and elevation of this rail and usually bringing about bad line, with resulting rough-riding track. With further regard to curve maintenance, the committee spoke of the importance of correct gage, pointing out that a point at which the gage is wide is apt to cause unsteady travel of the truck. Poor gage, it said, is also one of the factors which is sure to be developed further by the increased centrifugal force resulting from high speeds.

Turning to other elements of the track, the committee expressed the opinion that owing to the greater impact on the track resulting from high speeds, ties cannot be expected to have as long a service life as they are able to develop under less severe traffic conditions. "For this reason," it said, "ties must be placed and maintained with more accurate spacing than formerly, and it becomes much more important that ties of the same degree of hardness and elasticity be used uniformly." Emphasis was also placed on the ballast section, attention being called to the importance of having a wider and stronger

ballast shoulder on the outside of curves in high-speed territory than is required on straight track.

Turning to the subject of rails, the committee commented that perhaps these are the most critical factors in track subject to high-speed trains, because they must take the impacts of the wheels without bending or breaking. According to the report, "records have shown a very large increase in the number of rail failures within the period since high speed has become a reality. Also, from many sources we hear complaints of kinked and bent rails." The committee expressed a fear that there is considerable risk that within a few years we will find that high-speed steam locomotives have ruined a large amount of expensive rail by bending it long before it is worn out or otherwise ready for renewal.

Continuing its report, the committee spoke of the importance of special education for foremen in high-speed territory, pointing out that everything possible must be done to keep the track structure in as nearly perfect condition as possible. In this latter regard, it said that sufficient anchors must be placed to prevent rail creepage. When track is disturbed by either raising or lining, the necessary precautions must be taken to know that all ties are well tamped inside and out. Furthermore, the full ballast section should be restored to insure sufficient lateral resistance to the track under traffic. For the same reason, it cautioned, tie cribs should be kept filled at all times so that the ties will be well bedded in the ballast.

Other items commented upon in the report were the importance of keeping tie plates fastened securely to the ties, and of maintaining tight track bolts without causing joints to freeze. Attention was also called to the importance of the proper maintenance of joints to prevent the possibility of sun kinks occurring while surfacing or otherwise loosening the ballast.

In closing its report, the committee emphasized that frequent and close inspection must be made of the top, sides and undersides of the heads of rails, and of the fillets and sides of their web, not only to find cracks and the beginning of failures, but also to detect overstresses which indicate the beginning of bends or kinks. Where overstress indications are found, it said, "the speed of steam locomotives should be reduced, or the resulting bent and kinky rails will make the maintenance of smooth-riding track an impossibility."

A spirited discussion of the relative merits of lining curves by stringlining and by the transit method followed the presentation of this report, in which many members of the association told of their successful experience in stringlining curves. From the discussion it was evident that a large majority of those present considered stringlining, properly done, an accurate method of lining curves and that it is faster, more flexible and more economical than the transit method. It was voted to approve the report with the insertion of a paragraph recommending the use of stringlining for these reasons.

Utilization of Roadway Machines

The report of the committee on the Utilization of Roadway Machines, of which H. E. Kirby, assistant engineer, Chesapeake & Ohio, was chairman, emphasized the importance of obtaining a fair return on the money the railroads have invested in roadway equipment by programming work to obtain the maximum use of their machines throughout the year. The committee presented a sample table based on the use of pneumatic tie tamper outfits, showing the variations of the daily cost of investment for outfits of various sizes when worked 100, 200 and 300 days per year. To emphasize the contention

that most railroads are not making the maximum use of their roadway machines the report included another table, based on answers to a questionnaire, which showed that the average number of days per year that each type of equipment was used varied from a minimum of 21 for rail saws to a maximum of 208 for arc welders and surface rail grinders, with the use of a large proportion of the equipment averaging only from 80 to 130 days a year.

The report suggested better programming and co-ordination of maintenance work, with the view of making the maximum use of every piece of equipment, although it stated that unavoidable limits in this regard are imposed with some specialized or single-purpose machines and by certain seasonal work. To overcome the latter difficulty, it was suggested that the use of many roadway machines need not be confined exclusively to maintenance of way work, and that on some roads maintenance of way equipment is first used on scheduled work, after which other departments are given an opportunity to use it for any work for which it can be adapted.

In the interest of further development of this plan, the committee presented a list of jobs that can be considered non-seasonal, on which maintenance of way machines can be used. It also presented a table listing the various types of machines and showing the number of days that the different units must be worked in order to return carrying charges; the average number of days of seasonal maintenance work; the number of work days it is possible to expect from each machine; the number of days that the machines are available for other than seasonal maintenance work; and the non-seasonal or other department work on which each type of machine can be used.

In the opinion of the committee, the purchase of maintenance of way equipment should be made with a systems perspective; that is, from the point of view of the entire property, and should not be influenced by unusual conditions on one or two divisions or solely by heavy-traffic territories. However, it pointed out that in some cases the duplication of equipment of various types on a given division may be desirable because of short working seasons. In discussing equipment for rail-laying gangs, the committee stated that economy will result from the use of fully mechanized system rail-laying gangs, and that an investment in sufficient power machinery to equip several division rail gangs cannot be justified except perhaps in the case of a railroad with a large rail program, being required by its management to lay all of the rail in a very limited time.

In discussing the advantages resulting from the use of power equipment, the committee contended that the use of such equipment has resulted in improving the quality of the work and in the improvement of safety records. In this regard, it said that the margin of the saving produced by the use of certain units of equipment over hand methods may be very narrow, but the quality and uniformity of the finished job may more than justify their use. Concerning the quality of work performed with specific types of machines, the report continued, "It is known definitely that rail laid on mechanically-aided ties produces smoother and better riding track. This must be said also for power-tamped track, which, it has been proved, stands up longer between surfacings than when hand tamped, and with less damage to the ties. Likewise, track bolts tightened by mechanical wrenches, set to release at a predetermined point, are assured of fairly uniform tension throughout the rail joint."

Regarding the growing use of off-track equipment, the report said that the use of several types of off-track machines is proving to be economical practice, particularly

in dense-traffic territories. This may be said also, it pointed out, of the use of highway trucks and automobiles in congested territories where highways are convenient.

In discussing the proper maintenance of equipment, the committee emphasized that systematic repair methods and adequate supervision were most important, and suggested that perhaps the best method of maintaining equipment is to schedule general overhauls at regular periods and to keep running repairs to a minimum. The proper care of the machinery, both when in use and while idle, was stressed, as was also the importance of the careful selection, training and supervision of operators.

The report was approved without discussion.

The Roadmaster's Qualifications and Duties

Since it is sometimes considered that a railroad's investment in each of its roadmasters is as much as \$25,000, the men selected for this position must necessarily measure up to a high standard of experience and ability, according to a report on The Roadmasters' Qualifications and Duties, which was presented by a committee of which J. M. Miller, division engineer, Western Maryland, was chairman. In the first place, said the committee, such men should have what is commonly referred to as a "sterling character," with all the personal characteristics that this implies, such as honesty, ability, personality and a sense of fairness.

Also, continued the committee, the roadmaster should love his work. It contended that a man should not be advanced to roadmaster until he has shown conclusively that he is deeply interested in track work, and has demonstrated a complete knowledge of such work through experience in its construction and maintenance and in its action under traffic. Moreover, the roadmaster must have a thorough training in methods of performing track work, and as a necessary complement to this phase of his background he should never cease to strive for further knowledge by any of the means that are open to him.

According to the report there are two well-founded schools of opinion regarding the back-ground qualifications that roadmasters should have. One of these schools favors the practical man who has come up through the ranks, it being held by this group that the practice of advancing men in this manner stimulates all trackmen to seek promotion and otherwise acts as a balance wheel. The other school of thought favors the practice of selecting technically-trained men to fill the position of roadmaster. This group contends that the engineer can overcome his lack of knowledge of the details of maintenance more quickly than the practical man can learn how to lay out programs, compare costs and judge the efficiency of machines. Technical men, said the report, are much sought after, and are capable of advancing to higher positions in the general organization.

Aside from the qualifications already mentioned, the successful roadmaster must, according to the committee, know human nature and be a leader of men; he must have an interest in each man on his subdivision and be anxious to teach his men all he can; he must, by his record, establish a reputation for dependability; and he should be loyal, resourceful and safety-minded.

As for the duties of the roadmaster, he must, according to the report, have a complete and detailed knowledge of his entire territory in order that he can program his allotment intelligently; he must take the necessary steps to insure that maintenance tasks on his sub-division will be performed in an efficient and workman-like manner;

he must constantly strive for improved methods; and he must maintain an organization of highly interested and efficient men. Also, he must, among other things, inspect his tracks and structures periodically, supervise all important and hazardous jobs, and be an expert on line and surface. In brief, the committee pointed out, he must acquire all the necessary knowledge and take all the necessary steps to insure that the property under his jurisdiction will be maintained economically, efficiently and safely.

In concluding its report the committee recommended "that a roadmaster have the equivalent of a high school education, be familiar with the practice and theory of the string lining of curves, and have a thorough knowledge of proper super-elevation and how it is arrived at. He should be able to read and decipher blueprints and standards intelligently."

The discussion turned largely to the question whether the men should be advanced to supervisory positions from the ranks of practical track men or from the engineering forces. The general consensus of opinion was that no door should be shut to a man having the requisite capacity and industry, but that every man showing these characteristics should be given a chance to advance.

A. A. R. Arms High School Debaters

(Continued from page 485)

quests received by individual roads should be acknowledged by the proper officer and the inquirer informed that the request is being referred to the A. A. R., the Committee on Public Relations of the Eastern Railroads, or the Western Railways' Committee on Public Relations, according to whether the inquiry originates in Southern, Eastern or Western territories, respectively; (2) the files of such correspondence should then be referred to the one of the three organizations having jurisdiction, where they are to be checked against a master list of inquiries previously handled; and, (3) copies of the manual will be mailed by one of the three distributing offices (if the master list shows no duplication) without mention of any particular railroad.

The manual itself is a 64-page booklet which does two major jobs for the debaters taking the negative side of the argument. First, it presents the issue; that is, it steers the "nays" by pointing out what the advocates of government ownership and operation must be prepared to defend or deny. There follows a description of the physical and financial make-up of the American railroads and a review of former excursions of federal and state governments into the railroad business. Secondly, it presents quotations from some 135 authorities (authors, statesmen, editors, associations, etc.) which either openly oppose government ownership or point out its defects. It is of note that quotations are gleaned from Senator Wheeler, Congressman Lee, Commissioner Eastman and Editor William Allen White, of the *Emporia (Kans.) Gazette*, each of whom advocated government ownership at one time. The opinions of such "liberals" as President Roosevelt and Grand Chief Johnston and President Robertson of the two locomotive men's brotherhoods are also cited to support the negative contention. To each manual will be attached a four-page pamphlet presenting information for each of the 48 states, listing rail tax payments to schools and telling what would happen should the federal government take over; also a map showing cities or towns in the state where one or more roads made purchases during 1937.

Western Box Cars Ordered Home

Car Service Division takes steps to forestall shortages—Advisory Boards report traffic forecasts

WASHINGTON, D. C.

WITH freight car loadings reaching a new high for the year last week and prospects very bright that the 1937 peak of 843,861 cars will be surpassed in the near future, the Car Service Division of the Association of American Railroads, on September 23, sent out an emergency order to all carriers requiring that box cars of all roads in Western territory be returned to home lines as soon as they are unloaded; such cars must be returned empty unless new loads consigned to the owners' lines are obtained at once.

At the same time the A. A. R., through the Car Service Division, sent an appeal to all shippers and receivers of freight for cooperation in securing the maximum utilization of all equipment in order to assure a well-balanced car supply.

Traffic Increase Fastest on Record

W. C. Kendall, chairman of the Car Service Division of the A. A. R., in his letter to the members of the 13 Shippers Advisory Boards, gave compelling reasons for the emergency order, stating that "it is doubted" if there has ever been the degree of acceleration in freight car loadings which has occurred during the past month. In his letter Mr. Kendall goes on to say that "Freight car loadings, while considerably under the volume of 1929 and earlier years, are increasing rapidly." . . . "This is an appeal to all shippers and receivers to cooperate with the railroads in the same manner as they have in past periods of heavy car demand to the end that the maximum utilization may be had of available car supply."

The emergency order, No. 39, which supersedes and cancels Special Car Order No. 38, which applied to special type box cars belonging to the Great Northern, Northern Pacific, Union Pacific, and Southern Pacific, covers all box cars (except device-equipped automobile cars) owned by railroads in northwestern, central western, and southwestern districts, and by the Illinois Central. The new Special Order pointed out that "western districts being predominantly originating territory for box cars, current and regular return of such equipment to home roads is absolutely necessary."

"In the absence of immediate loading in accordance herewith, cars must be given expedited empty movement in home route. When such home route involves a circuitous movement, cars should be routed under reciprocal trading arrangements when possible; western cars empty at Chicago or St. Louis without home route at that point should be reported to District Manager for disposition."

The Special Order No. 39 directed:

(a) When released from lading on a railroad not a direct connection, box cars of the roads in the districts mentioned may be used for reloading only: (1) To or via owner's line; or, (2) To a destination in road haul service on a direct connection of owner when such loading is in direction of owner.

(b) When released from lading on a railroad that is a direct connection of owner, cars of the western roads may be used for reloading only: (1) To or via owner's line; or (2) To a junction point with owner.

After pointing out that car loadings for the week

ended September 16 totaled 805,733 cars, an increase of 140,536 cars, or 21.1 per cent as compared with the week ended August 12, Mr. Kendall, in a letter sent to the member roads of the A. A. R., said that "This rapidly increasing demand for transportation has been satisfactorily met, although a number of railroads have experienced increasingly close situations with respect to coal cars and box cars in condition for higher class commodities."

Railroads Urged to Follow Nine Precepts

The Car Service Division chief went on to say that "If increasing car demand is to be satisfactorily matched with performance, it is likewise fundamental that railroad operations be adjusted thereto. Car owners must be assured of prompt return of equipment which is loaded off line in order that a balanced supply may prevail. This is particularly true for roads in originating territory. To accomplish these results certain things must be done by all railroads. It will be necessary that—

1. Car Service Rules be observed.
2. Week-end campaigns be conducted to clear roads of all foreign empties which cannot be immediately used in accordance with the Car Service Rules.
3. Keep industrial tracks cleared of all empties except those which can be currently loaded.
4. Limit delivery of empty cars to short lines for return loading to the number which can be loaded promptly.
5. Press into service all available serviceable cars by fitting class of car to loading required. Do not waste class A cars in loading for which class B or C cars will be satisfactory. Tighten inspection at freight house and transfer points to the end that cars suitable for higher class loading may be removed from merchandise service.
6. Establish commodity inspection of cars in accordance with the Association's recommended practice. Many cars now "getting away" will thus be made available.
7. Good order cars shall not be used for storage of company material.
8. Avoid undue accumulation for industries by the use of embargo and permit.
9. Review all special per diem arrangements other than those approved under Rule 6, Appendix B, to the end that any waste in car days resulting therefrom may be eliminated through cancellation of such arrangements."

Mr. Kendall's letter to the carriers closes by informing them that the forces of the Car Service Division are being increased and roads may expect reports of frequent checks made at important terminals and interchange points.

Plea to Shippers

In his letter to the 13 Regional Shippers Advisory Boards, Mr. Kendall urged that all shippers consider the following means in which they can assist in their own interest:

1. Aid in the observance of Car Service Rules that cars may be forwarded promptly to the owners in order to maintain a well bal-

anced car supply. Especially is this important for predominantly originating territory.

2. Order cars as much in advance as possible, specifying type and size of car, destination, routing and commodity to be loaded.

3. Refrain from reloading cars released at plants where such loading is not in accordance with Car Service Rules, and unless authorized by serving road.

4. Match loading and unloading performance to the extent possible with the scheduled switching service, thus eliminating extra and special switching.

5. Promptly notify railroad agent of cars unloaded and ready to be moved out.

6. Shippers load cars to capacity, weight or cubical, as the case may be, where orders or unloading facilities permit. Consignees should also order full capacity loading. Such procedure, it was asserted, "furnishes an excellent way for shippers and receivers to provide additional equipment through self help."

7. Load and unload promptly. Instead of taking advantage of the full 48 hours free time, cooperation in releasing cars in time for an earlier switching pick-up will add to available car supply.

8. Completely unload cars, removing all dunnage and debris, thus making cars immediately available for next shipper and avoiding delay and expense incident to switching to and from cleaning tracks.

9. Prevent damage to high class cars, and consequent lost car days, by avoiding loading with contaminating commodities.

10. Cooperate by utilizing without rejection cars furnished by the railroad, if such cars have been approved by the railroad mechanical inspector for the commodity to be loaded.

11. Avoid inflation in car orders.

In addition to these emergency steps, the Car Service Division may ask the Shippers Advisory Boards for a re-check of their estimates for car needs during the fourth quarter of 1939 if the present trend of sharply increased loadings continues to the end of this month and any shortages manifest themselves.

Mr. Kendall further pointed out in his letter to the Advisory Boards that the railroad car and power supply during the past several years has been necessarily geared to the demand for utilization of the railroad plant although there has at all times since 1930 been a substantial surplus of serviceable cars and locomotives.

Heavy Repair and New Car Programs

"In view of the rising tide of business and the prospects for further increase in volume," he continued, "A. A. R. member roads last week unanimously agreed to take immediate steps to repair all available equipment. He also added that plans to purchase 25,000 cars in addition to the 20,000 previously installed this year were announced at the member road meeting last week.

"It has long been recognized—dating from the early 1920's—that no effort of the railroads themselves to provide adequate transportation service can succeed under heavy demands without the wholehearted cooperation of shippers and receivers in the use of railroad equipment," Mr. Kendall concluded. "Cars, for example, are in possession of shippers and receivers approximately 50 per cent of the time."

Advisory Boards See Large Increase

Freight car loadings in the fourth quarter of 1939 are expected to be about 13.8 per cent above actual loadings in the same quarter of 1938, according to estimates just compiled by the thirteen Shippers Advisory Boards and made public on October 2. On the basis of these estimates, freight car loadings of the twenty-nine principal commodities will be 5,784,468 cars in the fourth quarter of 1939, compared with 5,083,573 actual car loadings for the same classes of commodities in the corresponding period last year.

These estimates, the A. A. R. statement says, were prepared by the various Shippers Advisory Boards largely from replies to questionnaires submitted to individual shippers early in September, 1939 and before the sudden increases in carloadings subsequent to the outbreak of the European conflict were much in evidence or could be properly evaluated. The Advisory Boards now have under consideration the desirability of recanvassing membership early in October 1939 to permit the issuance of a supplemental forecast.

On the basis of replies received to the September questionnaires each of the thirteen Shippers Advisory Boards estimate an increase in car loadings in the fourth quarter of 1939 compared with the same period in the preceding year.

Estimated Loadings For Each District

The tabulation below shows the total loading for each district for the fourth quarter of 1938, the estimated loadings for the fourth quarter of 1939, and the percentage of decrease or increase:

Shippers Advisory Boards	Actual loadings fourth quarter 1938	Estimated loadings fourth quarter 1939	Per Cent Increase
Allegheny	668,905	778,399	16.4
Pacific Coast	231,655	237,370	2.5
Pacific Northwest	184,030	196,790	6.9
Southwest	338,038	357,018	5.6
Southeast	544,455	615,558	13.1
Great Lakes	317,765	388,799	22.4
Atlantic States	520,009	592,770	13.9
Central Western	233,886	251,970	7.7
New England	97,273	107,488	10.5
Northwest	244,892	308,950	26.2
Mid-West	766,942	889,645	16.0
Ohio Valley	639,399	743,193	16.2
Trans-Missouri-Kansas	296,324	316,918	6.9
Total	5,083,573	5,784,468	13.8

Of the twenty-nine commodities included in the estimate increases are expected for all except citrus fruits and other fresh fruits, and fresh vegetables other than potatoes. The twenty-six commodities for which increases are estimated follow: grain; flour, meal and other mill products; hay, straw and alfalfa; cotton; cotton seed and products except oil; potatoes; live stock; poultry and dairy products; coal and coke; ore and concentrates; gravel, sand and stone; salt; lumber and forest products; petroleum and petroleum products; sugar, syrup and molasses; iron and steel; machinery and boilers; cement; brick and clay products; lime and plaster; agricultural implements and vehicles other than automobiles; automobiles, truck and parts; fertilizers of all kinds; paper, paper board and prepared roofing; chemicals and explosives; and canned goods, including all canned food products.

Ore Loadings Expected to Be Up 59.1 Per Cent

Loading of ore and concentrates is expected to be 59.1 per cent greater in the fourth quarter of 1939 than in the same period last year while an increase of 39.3 per cent is estimated for cotton; 29 per cent for iron and steel; 20.4 per cent for canned goods; 16.9 per cent for agricultural implements and vehicles other than automobiles; 15.8 per cent for coal and coke; 14.6 per cent for machinery and boilers; 12.7 per cent for automobiles, trucks and parts; 12.7 per cent for fertilizers of all kinds; 11.2 per cent for paper, paper board and prepared roofing; 11.7 per cent for lumber and forest products; 10.3 per cent for brick and clay products and 10.2 per cent for potatoes.

Frank J. Gavin Elected President of Great Northern



Frank J. Gavin

FRANK J. GAVIN, who was elected executive vice-president of the Great Northern in May of this year, was elevated to the presidency of this road at a meeting of the directors in New York on September 26. Mr. Gavin is a product of the Great Northern, having entered its service in a clerical capacity in 1897. His selection adds to the already large group of practical operating officers who are directing large railways today, for his major experience has been in the operating department. During the last few years, he was associated closely with William P. Kenney, who was president of the road from 1932 until his death on January 24, 1939.

While Mr. Gavin's experience has been primarily in the operating department, he has also worked closely with other departments, especially during recent years when he relieved Mr. Kenney of many of the problems of management. He has been particularly interested in the function of the traffic department and has done much to perpetuate the tradition of the Great Northern—friendly service with efficient management. Typical of Mr. Gavin's attitude is his experience while supervising the transportation of ore from the Iron Range in Minnesota to the head of the lakes at Duluth—Superior. When he went to Duluth as general superintendent of the Great Northern in 1919, his initial problem was to improve the movement of the ore between the mines and the docks, but he also took such a keen interest in the problems of the shippers that he became the major contact for his railroad with its patrons in this area. Since July, 1936, when he was promoted to assistant to the president,

Entered railway service
in general offices in 1897.

Spent 40 years in roads'
operating department

his duties have been broadened and he has had opportunity to become well acquainted with all phases of management.

Mr. Gavin takes over the management of a railroad that is in an excellent physical and financial condition. At the end of 1938, its funded debt was only \$330,761,515 or 57 per cent of its total capitalization. The major portion of this amount carries very low interest rates and represents ownership of 829,337 shares of the common stock of the Chicago, Burlington & Quincy, acquired in 1901 for \$109,115,000. The total current assets of the railroad at the end of 1938 were \$39,476,631, while its total current liabilities were only \$25,153,714. In 1936, it successfully met a maturity of \$100,000,000 of 7 per cent mortgage bonds through the sale to its security holders of a like amount of 4 per cent ten year bonds. During the first half of 1937, \$61,024,000 of senior debt was replaced by \$50,000,000 of general mortgage 3¾ per cent bonds. These conversions have effected an annual reduction in interest charges of \$4,433,000.

For many years, the Great Northern was one of the most dependable earners in the country, but it has suffered by changes in the movement of traffic brought about by the construction of the Panama Canal, by the successive years of drought in its most productive agricultural areas and by the declining rate of industrial activity which has affected its ore and lumber traffic. It has, however, been able to service its debt throughout the depression without any sizable borrowing.

The Great Northern has long been a large carrier of products of mines, especially iron ore, and its earnings fluctuate with the activity of the steel industry. Thus, its freight traffic increased from 21,690,396 tons in 1934 to 41,513,174 tons in 1937, declining then to 23,264,183 tons in 1938. Its operating income likewise increased from \$15,951,058 in 1934 to \$25,139,406 in 1937, and then decreased to \$16,334,189 in 1938.

Mr. Gavin was born at Alberton, Prince Edward Island, in 1880, and entered railway service in 1897 as a clerk in the general offices of the Great Northern at St. Paul. Two years later he was transferred to the operating department at Spokane, Wash., and later to Everett, Wash. He returned to Spokane as a timekeeper in 1905, and the following year he was promoted to chief

clerk in the division superintendent's office at that point. Mr. Gavin was advanced to trainmaster of the Spokane and Kalispell divisions in 1911, and to superintendent of the Spokane division in 1916. In 1917, he was further advanced to assistant general superintendent of the Western district and one year later he was promoted to general superintendent of that district, with headquarters at Seattle, Wash. In the fall of 1919, he was transferred to Superior, Wis., and later his headquarters were changed to Duluth, Minn. In 1928, he was appointed assistant general manager of the lines East of Williston, N. D., with headquarters at Duluth, and on June 15, 1929, he was advanced to general manager of those lines, with the same headquarters. Mr. Gavin was appointed assistant to the president, with headquarters at St. Paul, in July, 1936, and in May, 1939, was elected executive vice-president.

Would Eliminate All Rock Island Equities

WASHINGTON, D. C.

A DRASTIC plan of financial reorganization for the Chicago, Rock Island & Pacific which would completely eliminate the equities of the preferred and common stockholders, merge all the road's various units into one company, and reduce the total capitalization from \$458,838,944 to \$306,497,380 was recommended to the Interstate Commerce Commission on September 22 by its Examiner P. A. Conway. The effective date of the proposed plan, which calls for a reduction in the annual fixed interest charges from \$14,052,769 to \$2,438,547, would be January 1, 1939.

The capitalization of the new company, as proposed by Examiner Conway, would consist of \$27,951,771 of undisturbed equipment obligations; \$36,405,000 of first mortgage four per cent bonds; \$40,000,000 of general mortgage 4½ per cent income bonds; \$75,000,000 of five per cent preferred stock; and \$127,140,609 of common stock. The total debt would amount to \$104,356,771, of which both fixed and contingent interest requirements would amount to \$7,575,547. To take care of the fixed interest, contingent interest, and to service the preferred stock a total of \$11,325,547 would be required.

New securities would be allocated to the various security holders on the following basis:

Rock Island general 4s for each \$1,000 bond would get \$89 of new first mortgage bonds, \$224 of new general income bonds, \$426 of new preferred stock, and \$461 of no-par common stock.

Rock Island first and refunding 4s for each bond would receive \$67 of new first mortgage bonds, \$98 of income bonds, \$188 of preferred stock, and \$434 of common stock.

Rock Island secured 4½s would get \$67 of new first mortgage bonds, \$98 of income bonds, \$188 of preferred stock, and \$434 of common stock.

Rock Island convertible 4½s would receive only \$100 of common stock.

Choctaw & Memphis first 5s would get par for par in new first mortgage bonds, with equal treatment for accrued interest.

Choctaw, Oklahoma & Gulf consolidated 5s would receive \$50 of first mortgage bonds, \$192 of income bonds, \$426 of preferred stock, and \$283 of common stock.

St. Paul & Kansas City Short Line first 4½s would

get \$49 of first mortgage bonds, \$84 of income bonds, \$135 of preferred stock, and \$459 of common.

Little Rock & Hot Springs Western first 4s would receive \$94 of first mortgage bonds, \$221 of income bonds, \$351 of preferred stock, and \$218 of common.

Rock Island, Arkansas & Louisiana first 4½s would get \$53 of first mortgage bonds, \$124 of income bonds, \$198 of preferred stock, and \$408 of common.

Burlington, Cedar Rapids & Northern consolidated first 5s would receive \$50 of income bonds, \$200 of preferred stock, and \$391 of common.

The Reconstruction Finance Corporation, for each \$1,000 bond, would get \$107 of first mortgage bonds, \$210 of income bonds, \$338 of preferred stock, and \$237 of common.

Bank creditors would receive \$56 of first mortgage bonds, \$90 of income bonds, \$157 of preferred stock, and \$434 of common.

General creditors, it was estimated by the examiner, would get about \$100 of new common stock on each \$1,000 claim.

The Peoria Railway Terminal Company bonds totaling \$928,000 would remain outstanding and would be extended and unguaranteed.

Secured creditors to the extent to the deficiencies in their claims would participate equally with the holders of the \$32,228,000 of unsecured convertible 4½ per cent bonds and general creditors in assets free of mortgage lien having a value of around \$14,000,000.

Equipment trust obligations and trustees' certificates would remain undisturbed under the proposed plan. The equities of the preferred and common stockholders are found to have no value and are accorded no participation in the plan.

The examiner also proposes to reserve \$11,000,000 of first mortgage bonds for sale for cash, the proceeds to constitute new money. The purchaser or purchasers of these bonds would receive as a bonus no par common stock at the rate of two shares of such stock for each \$1,000 bond, or 22,000 shares.

The examiner recommends that it should be left to the discretion of the reorganization managers as to whether a new company should be formed and become the reorganized company under the laws of such state as they may determine or whether the Chicago, Rock Island & Pacific, a corporation of the states of Iowa and Illinois, shall become the reorganized company, either retaining its charter from both states or abandoning its charter from either of such states.

In any event, he continues, the reorganized company should own all the properties of the debtor company, the properties of the Chicago, Rock Island & Gulf; Choctaw, Oklahoma & Gulf; St. Paul & Kansas City Short Line; Rock Island, Arkansas & Louisiana; Rock Island, Stuttgart & Southern; Rock Island Memphis Terminal; Rock Island Omaha Terminal; and the Morris Terminal. The examiner also holds that there should be conveyed to the reorganized company all of the properties, except the coal properties of the Rock Island Improvement Company, a wholly-owned subsidiary of the debtor. Under the proposed plan, the properties of the Rock Island Motor Transport Company would not be conveyed to the new company, but its stock would be owned by the latter.

In a notice accompanying the proposed report I. C. C. Secretary Bartel announced that exceptions to it may be filed in Washington, and served so as to reach other counsel of record, on or before November 15; replies to the exceptions may be filed and served on or before December 1. The case is assigned for oral argument before the commission on December 7 and 8.

NEWS

Walter Thompson Canada's Censor

C. N. R. publicity chief honored with key war post by Dominion Government

Walter Scott Thompson, chief for many years of the Canadian National's publicity organization, has been appointed director of censorship (press, radio, mail and cables) by the Dominion of Canada as a part of its program for conducting hostilities against the Nazis.

Advices from Canada indicate that, censorship being deemed necessary, probably



Walter S. Thompson

no one else in the Dominion could have been chosen for the post with greater approbation, because of the fact that few if any persons in Canada have a wider acquaintance with newspaper people than the new Censor, nor a fuller appreciation of their problems.

The Canadian National, under the presidency of the late Sir Henry Thornton, was one of the pioneer roads of North America to reorient its publicity services upon a comprehensive scale and to make its publicity director a staff officer—and Mr. Thompson has headed this department since its inception.

Known as the "dean of Canadian pub-

licity men" (despite the fact that he is in his early fifties), Mr. Thompson is English by birth, having been born at Newcastle-upon-Tyne in 1885. Educated at Rutherford College, Newcastle, he entered newspaper work in Fleet Street, London, England, being successively on the staffs of the St. James Gazette, the Daily Express, the Evening Standard and The Observer. On these newspapers he worked as reporter and also held various "desk" positions. Leaving England, he visited in turn South Africa, Australia, New Zealand and the South Sea Islands, working on various newspaper assignments. In 1911 he went to Canada and in the following year was city editor of the old Montreal Witness. Another year later he was city editor of the Montreal Herald, which position he held until his appointment as press representative of the Grand Trunk and Grand Trunk Pacific Railways in 1914.

With the amalgamation of these lines into the Canadian National System in 1922 Mr. Thompson became director of publicity of the Canadian National—railways, hotels, steamships and associated enterprises. Subsequently he was given direction also of the company's advertising and radio activities. On December 17, 1937, he was also appointed director of publicity, Trans-Canada Air Lines.

One of the most widely-traveled men in Canada, Mr. Thompson's duties have involved covering some 50,000 miles a year in maintaining personal contacts with newspaper men and writers at various points on the system and elsewhere and in overseeing the operation of the branches of the publicity department in New York, London, Toronto, Winnipeg, Moncton and Vancouver. He is the friend of a host of newspaper and magazine writers in Canada and other countries and has handled the press relations for many distinguished visitors to Canada including the Duke of Windsor (when he was the Prince of Wales), David Lloyd George and many others. He was chairman of the national publicity committee on the occasion of the Diamond Jubilee of the Dominion of Canada, 1927, and supervised the press arrangements on the recent visit of the King and Queen to Canada.

Beven Speaker at Transportation Luncheon

J. L. Beven, president of the Illinois Central, will be the speaker at the transportation luncheon of the Illinois Chamber of Commerce to be held at Chicago on October 12. His subject will be "The Railroad Problem."

N. E. Board Hears Chairman Joe

Eastman sees roads, like China, absorbing conquerors—
Need labor's good-will

Complete proceedings of the 30th regular meeting of the New England Shipper Advisory Board held in Burlington, Vt., September 14 and 15, have recently been made public. This makes available the text of the speech delivered by Chairman Joseph B. Eastman of the I. C. C., which was given ex tempore, the ex-coordinator having recently returned from a vacation in the Canadian woods. In his remarks Mr. Eastman expressed the opinion that several of the causes of the difficulty of the railroads cannot be eradicated because "the country" does not want to eradicate them. Said he:

"When it comes to the competition from other forms of transportation it is my idea that the country likes these other forms of transportation and does not wish to get rid of them. So that the method of curing the trouble or eradicating the causes is probably an unprofitable one to pursue."

He felt, however, that there is a great deal that can be done to improve the railroad industry by management itself in the matter of "offensive and defensive weapons"; and in utilizing these other forms of transportation. He illustrated his point by reference to China which has been conquered many times by enemies but which in the course of time absorbs these enemies "and is still the same old China."

The commissioner also felt that employees exercise an important influence in bettering their industry. "I think from their point of view as well as from the point of view of the public, they might well pay less rigid attention, maybe less combative, less insistent, to rights and privileges and working rules, which were recognized in the old days but which do not fit modern conditions any more than the old-fashioned passenger coach fits the modern passenger travel. I think they can be more cooperative in seeking economy and efficiency in the railroad operation, and also more considerate of the public. I mention that for their own sake as well as for the sake of the public, because I think they will find, unless they do adopt that attitude, that there are victories which can be turned into defeat, and they will find some

(Continued on page 503)

Ex-State Truck Tax No "Barrier"

Legitimate taxes no handicap to trade, says Stark—Warn of "phantom" car orders

In Kansas City, on September 20, at one of the first meetings of shippers' boards since the European crisis stimulated "hysterical buying," the Trans-Missouri-Kansas regional advisory board laid plans for railroad and shipper co-operation to avoid car shortages. Governor Stark addressed the group on interstate trade "barriers," drawing a sharp distinction between legitimate taxes and regulation, on the one hand, and purely gratuitous handicaps to commerce, on the other. Significant of the importance of the meeting was the large attendance, including many railway executives.

The original business forecast, made by the commodity committee chairmen in advance of the meeting, indicated a 4.9 per cent increase in business in the territory involved in the last quarter of 1939 as compared with the same period last year. At the meeting, however, it developed that recent events were such as to cause a radical revision upward of these figures—iron and steel, for example, estimated to show a 37 per cent increase prior to the meeting, was raised to a prospective 55 per cent increase. The total increase for the last quarter was expected to be between 15 and 20 per cent over last year.

L. M. Betts, manager of the closed car section of the Car Service division, pointed out that the present situation might be described as the "grain rush in reverse" for the hysterical buying indicates that all industries were caught with low inventories. The railways are taking steps to handle the increased business, he stated, and will be able to do so, providing co-operation in ordering cars can be had from shippers.

Mr. Betts outlined the situation with reference to new freight cars on order, which are far ahead of last year, and also supplemented the reports of the individual railroads in the board's district. All of the railways, Mr. Betts said, are increasing their car repair forces rapidly; the number of cars coming off the repair tracks is increasing at a rapid rate and everything is being done to provide an adequate car supply. He warned, however, that shippers must co-operate by ordering only such cars as they actually need. Mr. Betts also stated that an organization has been set up to prevent the congestion and delays on the Eastern seaboard experienced in the last war. If necessary, the emergency embargo force can begin operations on short notice.

A. M. Gass, district manager of the Car Service division, stated that the situation in the Trans-Missouri-Kansas territory is by no means acute, but that the railways can no longer be expected to provide empties for "phantom" loading. He reported a regrettable tendency on the part of many shippers to order more cars than necessary "just to be on the safe side," and

1939 Pipe Line Construction Greatest Since 1930

New construction of pipe lines for crude oil, natural gas and gasoline during the first nine months of 1939 indicated that this year will be the most active in pipe line activity in nearly a decade, according to the annual pipe line issue of the Oil & Gas Journal, September 21. Lines recently completed and now being laid total more than 4,000 miles, not including numerous short lines and replacements. These new lines, including terminal facilities, according to the magazine, represent an expenditure of more than \$100,000,000 thus far this year. Reconditioning of the old lines is also being carried on in all parts of the country; one crude oil line, for example, is being converted to gasoline service.

Pipe lines for the transportation of gasoline are coming into increasing importance. The journal estimates that a total of 1,180 miles of such lines will be built this year in the United States. This trend, it declares, "is affecting the market structure of the entire industry." Of water transportation in connection with pipe lines, the paper points out that at a few points water terminals have been built along pipe lines from which tankers distribute the products among river and lake cities. Such movement is growing in importance, but has a limited application because of conditional and seasonal conditions.

asked for a discontinuance of this practice, for the benefit of the shippers and railroads as a whole. He also outlined plans for setting up a system of loading from the storage grain elevators similar to that used during the annual wheat rush, except that, in this case, stress will be placed on the outbound loading schedules from the elevators rather than the inbound movement to elevators.

At a joint luncheon of the board and various Kansas City civic bodies, Governor L. C. Stark of Missouri addressed nearly 1,000 guests on the Removal of Trade Barriers Between States, in which he stressed the fact that many of the alleged barriers which have been attacked are "perfectly legitimate and serve a useful purpose."

He cited the taxation of out-of-state trucks on the same basis as those of the state levying the tax as representing the opposite of discrimination (as alleged by truck propagandists.) "It is a mistake, too," he added, "to assume that any bonding charge placed upon merchant truckers is a trade barrier."

"We must," he concluded, "guard against confusing unnecessary trade barriers which hamper business with those reasonable taxes and fees which every form of private enterprise is called upon to contribute to the operations of county, state and federal government."

Treasury Officers Hold N.Y. Session

First treasury division meeting in 23 months features discussion on shippers' credit

Some 225 members and guests of the Treasury division of the Association of American Railroads attended the 32nd annual convention of railroad treasury officers and the third annual meeting of the group under A. A. R. auspices in New York on September 21 and 22. E. H. Bunnell, vice-president, Finance, Accounting, Taxation & Valuation department, A. A. R., on the first day presented a brief resumé of legislation affecting the carriers considered at the last session of Congress. In the course of his remarks, the speaker urged the treasurers to utilize their many contacts with shippers and financial interests to win good-will for the railroads and their legislative needs. On the second day, L. W. Horning, regional director, Eastern region, Competitive Transportation Research, A. A. R., discussed the efforts by the railroads in the past several years to overcome inequalities in competing with the other transportation media through research into the entire field of transportation.

Lively interest was shown by the members toward reports by committee chairmen on technical problems. The topic which drew the most discussion, according to E. R. Ford, secretary of the Division, was that of the extension of credit by the carriers to shippers. Debate resulted in adoption of a resolution to the effect that action be taken toward the removal of unfair competition arising from the disparity in the credit rules for railroads promulgated by the Interstate Commerce Commission under Ex Parte 73, as against rules applicable to motor carriers laid down in Ex Parte MC-1. The convention directed that the matter be placed before the I. C. C., through appropriate channels provided by the A. A. R., with the view of securing remedial action.

Under existing statute, railroads are required to collect their transportation charges prior to relinquishing possession of freight, but they are permitted, under certain conditions set forth in Ex Parte 73, to allow periods of 48 and 96 hours within which to effect settlement. Motor carriers, on the other hand, are allowed a period of seven days in which to exact settlement of their transportation charges as well as a period of seven days within which to render bills, so that for practical purposes they may extend credit for a maximum of 15 days as contrasted to the 96 hours' maximum of the rail carriers. During the discussion it was brought out that S. 2009, as passed by the Senate, would, if enacted into law, possibly result in some uniform rules for railroads and their competitors governing the extension of credit for tariff charges, whereas the *status quo* is maintained if the House amendments prevail.

Among the more important subjects reported upon by R. E. Connolly, chairman,

Treasury Advisory Committee and treasurer of the Illinois Central, in addition to the matter of collection of tariff charges by motor carriers, was the establishment of joint credit arrangements at common points throughout the country under the program initiated by the Division in 1938. He reported that such arrangements are now effective at approximately 885 points served by two or more railroads. As the result of numerous queries concerning proper enforcement of the Interstate Commerce Commission's several decisions under Ex Parte 73 relating to the extension of credit for tariff charges, a uniform set of instructions or memoranda was prepared incorporating all decisions of the Commission in this connection, for eventual promulgation to railroad credit officers as information. Regarding suggested uniformity in collection of transportation charges on carload import shipments placed in general storage under bond for convenience of consignee, it was concluded that it would be impossible to formulate a rule for uniformity in bond requirements which would receive unanimous adoption by the railroads. He reported it to be the decision of a special committee considering fiscal methods that the methods and forms used by reporting carriers are basically uniform and adequate with only such variations as may be made necessary by the volume of work and individual requirements of each carrier. Consideration was also given to collection of C. O. D. charges; revision of the C. O. D. rules to include carload traffic, with a lower carrier service charge; and amendment of the blanket indemnity bond by the Treasury division to strengthen its protective features and provide for possible changes in ownership or operation of the railroad, pursuant to the provisions of Section 77. The Advisory committee was of the opinion that requests from banks for guarantees in connection with checks bearing facsimile or mechanical signatures should be resisted by treasury officers. The treasury officers also decided that identification cards for use of railroad patrons should not be issued by the carriers for passenger transportation, owing to the inherent difficulties of proper policing. The question of accepting travelers' checks of Secured Negotiable Instruments, Inc., was considered and it was recommended that for the present the acceptance of such checks should not be recommended.

A program initiated by the A. A. R. to secure co-operation of the treasury officers in its general public relations program was discussed by J. A. Simpson, chairman of the Committee on Relations with the Public, and treasurer of the Southern Pacific, who described the treasury officers' work in arranging for speakers at meetings of bankers, civic and commercial groups, who drew attention to the railroads' efforts to secure a national transportation policy. He also pointed out that through the efforts of the treasury officers many advertisements favorable to the industry were sponsored by financial institutions and other commercial organizations interested; during the past year approximately 200 advertisements have been published by banks in newspapers in over

60 cities in more than 15 states. Mr. Simpson stated that the idea had spread to railroad supply houses and others.

Mr. Bunnell announced the appointment of the following officers to serve as members of the Advisory committee for the coming year: R. P. Ahrens, New York-Central; R. E. Connolly, Illinois Central; H. B. Fink, Atchison, Topeka & Santa Fe; Harry Hurst, Pennsylvania; J. J. Jenkins, Baltimore & Ohio; F. O. Linstead, Chicago & Northwestern; P. Nichols, Atlantic Coast Line; J. A. Simpson, Southern Pacific; E. G. Smith, Union Pacific; A. T. Williams, Chicago, Burlington & Quincy; C. Williams, Alton; and W. J. Wright, Missouri Pacific. A. E. Tate, assistant treasurer, Southern, was re-elected chairman of the Sectional Co-ordinating committee. By virtue of his re-election, he continues to serve as a member of the advisory committee. Mr. Ford continues as secretary of the Division, with headquarters at Washington, D. C.

Railway Tie Association

At a recent meeting of the Executive committee of the Railway Tie Association, it was voted to hold its twenty-second annual convention of that organization at the Brown Hotel, Louisville, Ky., on May 21-22, 1940.

Midwest Board Meeting

The Midwest Shippers Advisory Board will hold its fall meeting on October 5 at the Leland Hotel, Springfield, Ill. At a luncheon sponsored by the board and the Springfield Transportation Club, Martin Phillipsborn of the Tax Division of Illinois will be the speaker.

Order in C. C. C. Again Postponed

Division 3 of the Interstate Commerce Commission has further postponed the effective date of its order in the recently-decided case involving reduced fares for Civilian Conservation Corps enrollees in the West from October 1, to December 1, 1939. The decision in the case, details of which were given in the *Railway Age* for July 1, page 47, held that the proposed establishment of reduced passenger fares for the exclusive use of enrollees of the C. C. C. traveling on furlough or leave at their own expense was not justified and dismissed the case.

Want a \$5,600 Federal Job?

The United States Civil Service Commission announces open competitive examinations for the following positions: Principal transportation economist, \$5,600 per year; senior transportation economist, \$4,600; transportation economist, \$3,800; associate transportation economist, \$3,200; assistant transportation economist, \$2,600. The duties of those qualifying for such positions will be to plan, direct, conduct, or assist in economic research in the field of transportation; to prepare economic briefs, reports, and bulletins; and to represent government bureaus or departments before transportation regulatory bodies or in contacts with federal or state organizations and private interests. Competitors for the positions will not be required to

report for examination at any place but will be rated on the extent of their education. Applications may be filed with the Civil Service Commission, Washington, D. C., not later than October 16 from eastern states and October 19 from Far Western states.

P. R. R. Circular Announces Timetable Changes

The Pennsylvania has issued a four-page pamphlet announcing its new schedules effective September 24 with the ending of daylight saving time. A condensed timetable of through trains is printed with the columns covering runs whose schedules have been modified printed in red ink.

The road has cut the eastbound running time of its all-coach "Trail Blazer" between New York and Chicago by 25 minutes, thus placing the train on a 17-hour schedule to conform with the westbound run. The westbound "General" has also been quickened to Chicago, making it a 17-hour train in both directions. The schedule of the "St. Louisan" has been shortened to provide a connection at Cincinnati, Ohio, with the Louisville & Nashville's "Pan American," affording through overnight sleeping car service between New York and Memphis, Tenn. The eastbound "Golden Arrow," Chicago to New York, has been speeded up 25 minutes, placing it on a 17-hour schedule.

Would Authorize Pennsylvania Greyhound Extension

Pennsylvania Greyhound Lines, Inc., a motor carrier affiliate of the Pennsylvania, would be authorized to extend its operations as a common carrier of passengers by motor vehicle in interstate and foreign commerce between the following points: Cleveland, Ohio, and Wooster; Cleveland, Ohio, and present routes at junction of Ohio Highways 94 and 5; Wooster, Ohio, and Mansfield; and Cleveland, Ohio and Columbus if the Interstate Commerce Commission adopts a proposed report and order of its Joint Board No. 117, composed of Dane O. Sprankle of Ohio.

"U. S. Steel News" Puts Out Railroad Number

The current issue of "U. S. Steel News" devotes its 30 pages almost entirely to the railroad industry. An historical article starts off the list; a description of the steam locomotive, with special emphasis on the manufacture of its parts by steel producers, follows; the construction of cars and recent trends in metals used therein next receives treatment. The chief feature of the issue is a complete description of the milling of steel rails with a double page diagram of the rolling process. The manufacture of wrought steel wheels is next presented, and the issue closes with commentaries on track and track fittings.

Frowns on Increased Fertilizer Rates

In a proposed report in I. and S. 4522, fertilizer in Central Territory, which also embraced No. 28063, National Fertilizer Association, Inc., vs. Akron, Canton & Youngstown et al., Interstate Commerce

Commission Examiner A. S. Worthington has recommended that the commission find not justified proposed increases in rates on fertilizer and fertilizer materials between points in Central territory. He has further recommended that the present rates be found unreasonable to the extent that they exceed or may exceed those in effect December 19, 1937, increased 10 per cent.

Appointment Made in Car Service Division

A. G. Warren has been appointed acting district manager of District No. 2 of the Car Service Division of the Association of American Railroads with headquarters at 6-A Michigan Central Terminal, Detroit, Mich., according to a recent announcement by W. C. Kendall, chairman of the Car Service Division.

The announcement states that the appointment was made temporarily to re-

lieve W. J. McGarry of the responsibilities of the district manager to enable him to devote himself entirely to the open car situation as manager, Open Car Section, Car Service Division and manager, Ore and Coal Exchange.

\$84,699,000 Net Deficit For First Seven Months

Class I railroads of the United States in the first seven months of 1939 had a net deficit of \$84,699,000 after fixed charges, the Association of American Railroads announced on September 23. For the first seven months of 1938, Class I roads had a net deficit of \$183,906,000.

Class I railroads for the month of July, 1939, had a net income after fixed charges of \$6,578,000 compared with a net deficit of \$3,885,000 in July, 1938. The same railroads in July, 1939, had a net railway operating income, before fixed charges, of \$49,012,000 compared with a net railway

operating income of \$38,431,000 in July, 1938.

Club Meetings

The Society of Automotive Engineers will hold a national transportation meeting at the Hotel Coronado, St. Louis, Mo., October 26 and 27. The program is under the direction of the S. A. E. Transportation and Maintenance and Truck, Bus and Railcar Activities and will cover topics of interest to this branch of the industry.

The Traffic Club of Newark, N. J., will hold its next regular meeting at the Robert Treat hotel, October 2. H. A. Palmer, editor, "Traffic World," will speak on "The Transportation Situation." The next traffic club forum will be held October 9 at the same place. R. W. Starkey, district sales manager, Railway Express Agency, will talk on the "History of Growth and Development of Express in America."

I. C. C. Suspends Proposed Rates

The Interstate Commerce Commission has suspended from September 25, 1939, until April 25, 1940, certain schedules of the St. Louis Southwestern which propose to reduce the rates on cottonseed and soya beans, in carloads, from various points in Arkansas and Missouri to Blytheville, Forrest City, Little Rock, West Memphis, Helena, Ark., and Memphis, Tenn.

The commission has also suspended from September 23, 1939, until April 23, 1940, the operation of certain schedules of the Seaboard Air Line which propose to cancel transit arrangements at Richmond, Va., on grain and grain products originating at points west of the Mississippi River or in central territory and destined to points in the South.

Welding on Railroads to Be Featured by Welding Society

The use of welding on railroads will be featured by the American Welding Society at a railroad session during its twentieth annual meeting to be held at Chicago on October 22 to 27. At the railroad session, beginning at 9:30 a. m. on October 27, three papers will be presented, including one on Maintenance of Way Welding, by C. E. Morgan, superintendent of work equipment of the Chicago, Milwaukee, St. Paul & Pacific, another on Automatic Welding in the Design and Construction of Railroad Rolling Stock by F. C. Hasse, general manager of the Oxweld Railroad Service Company, and a third on Production Spot Welding in the Manufacture of Freight and Passenger Cars, by J. W. Sheffer, assistant engineer of the American Car and Foundry Company.

Highway-Railroad Grade Crossing Accidents Decrease

Fatalities resulting from highway-railroad grade crossing accidents in the first half of 1939 totaled 680, a decrease of 16 fatalities compared with the corresponding period last year, the Safety Section of the Association announced on September 25.

In the first six months of this year, 1,846 persons were injured in such accidents, compared with 1,962 in the corresponding period of 1938. Accidents at

Towns Refuse Bus Permit, Fearing Loss of Railroad

A petition of the Red Wing Transit Corporation for authority to operate a motor bus line between Rochester, N. Y., and Mount Morris has been denied by the New York Public Service Commission chiefly because three towns and two villages denied petitions for local consents. Apart from the contention on the part of some of the towns that the highways and streets to be used by the bus line are unsafe for such service, the chief basis for their refusal apparently lay in a desire to preserve passenger service on the 34-mile Rochester branch of the Erie which parallels the proposed bus route almost throughout.

While the Erie and the Avon, Genesee & Mount Morris (owner of the section of the branch between Avon and Mount Morris, whose lease to the Erie has recently been disaffirmed) have indicated their desire to discontinue all passenger service between Avon and Mount Morris and continue to run but one train in each direction between Rochester and Avon, which intention led the applicant for the bus route to seek to establish the line, the municipalities nevertheless refused consent for the bus route chiefly on their desire for continuance of the Erie's passenger service.

The commission approved a report of the examiner which stated that "the views of the municipalities as to local conditions, both as to safety of operation and the need for bus service, are entitled to great weight," and recommended that "the commission should not substitute its judgment for that of the municipal authorities unless it be demonstrated that such action is necessary in the public interest." About half of the length of the proposed bus route and over half of the population along it are in municipalities which withheld their consent. Two towns withheld such consent because adequate and satisfactory service is operated by the Erie.

One town stated that the motor bus application had not shown proper financial ability, experience or equipment to provide adequate service and "that competition would tend to reduce the quality of service and make both rail and bus operation unprofitable." Another town pointed out that the establishment of the bus line would serve as an argument for the Erie to discontinue passenger service and that if the railroad were to suspend operations a large source of revenue to the town would be lost.

Passenger service provided by the Erie over the branch consists of 3 trains daily except Sunday in each direction between Mount Morris and Rochester, and one in each direction between Avon and Rochester. Sundays one train is operated between Rochester and Mount Morris. Until about ten years ago the branch was operated by electric multiple-unit cars and in the hey-day of passenger volume the schedules showed about 11 trains in each direction daily.

The applicant for the bus route proposed to operate four new 25-passenger buses making six daily round-trips between Rochester and Mount Morris and three round trips between Rochester and Avon. It was stated that arrangements for interline tickets had been made with the Central Greyhound Lines of New York for interchange at Rochester and with the Delaware, Lackawanna & Western for interchange at Mount Morris, the proposed operating timetables connecting with all through trains of the Lackawanna. It was testified that prior to the reduction of the Erie's service to its present status approximately 200 passengers were interchanged at Mount Morris per month and that the failure of the Erie's present schedule to harmonize with the Lackawanna's has caused a great diminution of volume at that point.

highway-railroad grade crossings in the six months' period this year totaled 1,605, a decrease of 46 compared with the same period last year.

In the month of June alone, there were 102 fatalities resulting from highway-railroad grade crossing accidents, a decrease of four compared with June last year. Persons injured totaled 224 compared with 279 one year ago. Highway-railroad grade crossing accidents in June this year totaled 222, compared with 242 in June one year ago.

New York Man Gets Retirement Board Post

The Railroad Retirement Board has announced the appointment of Harry K. Herwitz as chief of its Plans and Procedures unit. Mr. Herwitz was formerly with the New York State Department of Labor as assistant executive director of the Division of Placement and Unemployment Insurance, in charge of the Planning Unit. His appointment with the Railroad Retirement Board was effective September 16.

Before entering the New York State service, Mr. Herwitz had served as a member of the staff of the Chicago Bureau of Public Administration and more recently was a vice president of the Amalgamated Bank of New York City. During the days of the N. R. A., he served as controller of the Code Authority for the men's clothing industry.

Consumer's Counsel Files Brief With I. C. C.

The consumer's counsel of the Department of the Interior has asked the Interstate Commerce Commission in a brief to uphold a proposal by five midwestern railroads to establish freight rates on coal shipped from Illinois, Indiana and Western Kentucky to Chicago for transshipment to lake vessels. The rates were to have become effective on February 4 but were suspended by the commission when eastern carriers and coal producers protested.

In his brief the consumer's counsel says that he believed "the advantages of the cheap lake transportation should be accorded to coals produced in Illinois, Indiana and Western Kentucky," thereby giving the consumers in the territory served by the lake cargo business "the opportunity to use these coals as well as the coals now offered them from eastern producing fields."

Short Lines to Meet in Kansas City October 23 and 24

The twenty-sixth annual meeting of the American Short Line Railroad Association will be held at the Continental Hotel, Kansas City, Mo., on October 23 and 24. The program includes an address by Burton K. Wheeler, chairman of the Committee on Interstate Commerce of the United States Senate, at a luncheon on October 24; another by Marion M. Caskie, immediate past chairman of the Interstate Commerce Commission, during the business session on October 23, and another by James G. Robinson, director of unemployment insurance of the Railroad Retirement Board,

at a business session on October 24.

Reports of officers will include those of the president and board of directors, the secretary-treasurer, the general council and the traffic managers, while those of standing committees will include car service, legislative, operating and traffic committees. In addition to these reports, legislative policies will be given special consideration.

New Haven Plan Considered at Old Colony Hearing

The future of Old Colony suburban passenger service in the Boston (Mass.) area, operated by the New York, New Haven & Hartford, was discussed at the first public hearing of a special legislative commission investigating transportation facilities which was held in Quincy on September 26. Trustees of the New Haven have submitted to the commission a tentative plan for continuing passenger service to several of the larger stations and feeder service by motor bus for the remainder of the communities now served by rail. The commission has neither approved nor disapproved the plan but will hold it under investigation.

The railroad's plan provides for hourly service by railroad between South station, Boston, and Braintree during the day, in place of the present half-hourly service. Rush hour service by railroad would be continued from Braintree to Hingham, Whitman and Campello with bus service during the middle of the day and afternoons. Beyond these three points all train service will be discontinued, with the probability of a substitution of bus services.

Additions Being Built at Sun Valley

An improvement program at Sun Valley, Idaho, which includes the construction of a new ski lift, a new combination mountain cabin, restaurant and observatory, and four new skiers' chalets, has been undertaken by the Union Pacific and will be completed for this winter's season. The new ski lift, being built on Bald mountain, will attain a 9,200 ft. elevation. It will be one of the longest in the world, and is being constructed in three units or stages, the total length to the summit being more than 11,500 ft.

The new mountain cabin is being erected at the end of unit two of the lift, at an elevation of 7,876 ft. It will be a combination shelter-hut, restaurant and observatory, the main portion of which will be octagonal and entirely glassed in. In the center will be a large four-sided fireplace and out-of-doors there will be terraces for sun bathing and dining. Rooms similar to accommodations in the present skiers' chalet will be available to 196 additional guests in the four new chalets now under construction. Each room will be equipped with four bunk-type beds, and lavatories. There will be central bathrooms for men and women in each chalet.

For the Consolidation of Exhibits

A luncheon meeting of representatives of the American Railway Engineering Association, the Roadmasters and Maintenance of Way Association, the American Railway Bridge and Building Association and the Signal Section, A. A. R., with

representatives of the railway supply associations interested in and exhibiting at the conventions of these organizations, was held at the Hotel Stevens, Chicago, on September 18.

The meeting was called by E. D. Cowlin, chairman of the Committee for the Consolidation of Railway Supply Associations, who outlined the hope of the supply associations that some plan could be developed which would permit the manufacturers to present one consolidated exhibit for the members of these various associations. Since the success of this plan depends upon the co-operation of the railway associations in adjusting their conventions to meet at approximately the same time, a committee of representatives of these railway associations was appointed, with F. R. Layng, chief engineer, B. & L. E., and a representative of the A. R. E. A. as chairman, to consider the proposal from the standpoint of the railway associations.

Recent Rulings of Railroad Retirement Board

The Railroad Retirement Board has approved the recommendations of its general counsel that unemployment insurance benefits under the Railroad Unemployment Insurance Act are payable on the basis of service to the following companies: Chicago, South Shore & South Bend of Michigan; Denver & Intermountain; Oklahoma; and the Union Stock Yard & Transit Company.

In another case the Board approved the opinion of its general counsel to the effect that the Great North Western Telegraph Company of Canada is an employer within the meaning of the Railroad Retirement Act and the Railroad Unemployment Insurance Act, as a company indirectly owned and controlled by a carrier employer and performing a service in connection with the transportation of passengers and property by railroad.

The general counsel has also decided that the right of a widow to receive a survivor annuity under the joint and survivor provisions of the Railroad Retirement Act is not affected by the fact that she may secure some kind of employment. In reply to an inquiry, the counsel stated that "There is no provision in the act which restricts in any way the right of an individual in receipt of a survivor annuity to continue in or secure employment of any kind."

D. L. & W. Will Participate in County Bicentennial

The Delaware, Lackawanna & Western will be represented in a celebration to be held in Morris county, N. J. to commemorate the bi-centennial of the settling of that part of its territory. In co-operation with the civic committee of Madison, the railroad will be represented by a pioneer locomotive and passenger car depicting the coming of the railroad to New Jersey in 1837. The old equipment, loaned by the Baltimore & Ohio, will be mounted on automobile chassis and will bear the name of the Morris & Essex, owner of the original railroad in the territory which the Lackawanna has leased.

The old locomotive and car, in charge

of the Madison committee in costumes of the period, will tour the county on October 6 and 7. The railroad will also be represented in an historic pageant in Morristown on October 12 by its exhibition of Lackawanna locomotive No. 1939 (a performer in the World's Fair opera-pageant "Railroads on Parade"), a railway post office car, a modern day coach, a dining car and a club-observation car recently completed in the Lackawanna shops. Invitations to a reception will be extended by the road's officers to a committee in charge and officials of the county and state. Officers of the road will accompany the train to Morristown to participate in the main celebration.

June Accident Statistics

The Interstate Commerce Commission's completed statistics of steam railway accidents for the month of June 1939 now in preparation for the printer, will show:

Item	Month of June		6 months ended with June	
	1939	1938	1939	1938
Number of train accidents	420	395	2,748	2,699
Number of casualties in train, train-service, and nontrain accidents:				
Trespassers:				
Killed	256	234	1,047	1,027
Injured	250	266	1,108	1,149
Passengers on trains:				
(a) In train accidents:				
Killed .....	...	41	1	44
Injured	45	77	174	240
(b) In train-service accidents:				
Killed	1	...	5	10
Injured	143	133	780	925
Travelers not on trains:				
Killed .....	...	...	3	2
Injured	60	53	402	375
Employees on duty:				
Killed	35	32	237	234
Injured	1,362	1,246	7,856	7,594
All other nontrespassers:†				
Killed	107	125	734	744
Injured	361	434	2,547	2,727
Total—All classes of persons:				
Killed	399	432	2,027	2,061
Injured	2,221	2,209	12,867	13,010

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than \$150 to railway property.

† Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Number of accidents	222	242	1,605	1,651
Persons:				
Killed	102	106	680	696
Injured	224	279	1,846	1,962

I. C. C. Requests Additional Freight Information

Interstate Commerce Commission Secretary Bartel has addressed a letter to the chief executives of class I steam railroads including switching and terminal companies, asking for additional information which is to be used in the Senate interstate commerce committee's investigation of railroad methods of handling forwarder, l.c.l., and express traffic. Details of the original questionnaire which was dated September 12 and sent to all roads, were given in the *Railway Age* for September 16, page 422.

The supplemental order of the commission, which is dated September 26, amends the original instructions for answering the

questionnaire by adding the requirement that carriers show in a footnote the number of freight forwarded-received from connections, included in Column 2, which were received in cars not worked at interchange points. It is pointed out by Secretary Bartel that discussions with representatives of several carriers and the Association of American Railroads discloses that the additional information is essential in computing the average load (tons per car forwarded).

The I. C. C. letter also gives instruction for the reporting of the tons and cars of l.c.l. freight originated on lines of switching carriers which handled that traffic only on manifest, the billing being made by the first line-haul carrier.

Secretary Bartel also states that some of the carriers have asked whether tons and cars of freight handled in intermediate switching service should be included in this study. The commission's answer is "No." "Intermediate switching service", the letter continues, "was defined by the commission in its report on Des Moines Union Railway Switching (231 I. C. C. 631) as follows:

"Intermediate switching is a kind of switching service which includes all the elements of switching performed by a carrier which neither originates nor terminates the shipment nor receives a line haul on that shipment."

L. I. Inaugurates "Swing" Trains to New York World's Fair

A "rug-cutting" swing band "raised the roof" in Pennsylvania station, New York, at 7:30 p. m., September 22 when it gave a send-off to the first "swing" train of the Long Island bound for the swing Mardi Gras Casino at the New York World's Fair. On board the first "swing train" was Eddy Duchin, whose orchestra is the first of the leading "name" bands scheduled to appear in the ballroom. On

board also was a small orchestra which played for dance patrons desiring to use the aisles of the cars for their animated jigs.

With the exception of Sunday, when the casino is closed, swing trains will shuttle between Pennsylvania station and the Fair from 7:30 p. m. until well past midnight. They will be operated at the regular 10-cent fare which has prevailed for Pennsylvania shuttle trains to the Fair.

Electrification Brings High Speed Passenger Service in Italy

The first test run of a multiple-unit electric train (of a type similar to that on exhibit at the New York World's Fair) on the main line of the Italian State Railways between Florence and Milan, following completion of electrification of the route covered the 196 miles at an average speed of 102 m.p.h. The 60-mile stretch between Florence and Bologna was covered in 38 minutes or at an average speed of 95 m.p.h., the relatively low speed being due to the mountainous nature of the country traversed. The 136-miles of practically level land between Bologna and Milan was covered in 77 min. or at an average speed of 106 m.p.h. The highest speed attained by the test train is reported to be 125.8 m.p.h. in the neighborhood of Piacenza for a distance of between 12 and 18 miles. This is the highest speed ever attained on the system and is close to records established on British and American roads.

Completion of electrification between Milan and Bologna (the Bologna-Florence line has been electrified for several years) now makes it possible to travel by multiple-unit electric trains from Milan to Rome and Naples. However, since none of the short lines connecting the main stems of the Italian system with foreign roads has been electrified, international trains are still operated by coal trains for some distance



"Jitter-Bugs" Dance in the Aisles on Board the First Long Island "Swing" Train to the New York World's Fair

within the Italian border before a motive power change can be effected.

The Italian State Railways are planning to sink 8,480,000,000 lire (\$424,000,000) in a program of improvements planned to be completed by the year 1942 when the International Exhibition will be held in Rome. Among improvements planned are the electrification of some 1,587 miles of line of which 462 miles will be double tracked. Among the lines included in the program are stretches from Domodossola to Milan and from Trento to Bologna, completion of which will make it possible to run international trains from France via Lausanne, and from the north via Bolzano, to and from Italian points entirely under electric power.

August Truck Traffic Up 25 Per Cent (Twice As Much As R. R. Rise)

Stimulated by seasonal business improvement, movement of revenue freight by motor trucks reached a new peak in August, according to a monthly survey prepared by the American Trucking Associations. The survey, based on comparable reports received from 191 motor carriers in 36 states, revealed that truck loadings in August were heavier than in any single month since January, 1937, when computation of national averages was undertaken. August loadings were 17.8 per cent over July of this year, and 24.7 per cent above the figure for August a year ago.

In the four weeks of August, railroad carloadings averaged about 12 per cent above those of August last year—an increase just about half as great, percentage-wise, as that shown by the trucks.

The 191 reporting carriers transported 1,007,851 tons of freight last month, as against 855,545 tons in July, and 807,963 tons in August 1938. The August figures represent an increase of 26 per cent over the 1936 monthly average of the reporting carriers. The ATA truck loadings index figure for August, 1939, computed by taking the 1936 monthly average to represent 100 per cent, was 126.02. This compares with an index figure of 113.56 for July of this year, and 107.73 for August, 1938.

General merchandise, accounting for a little more than 73 per cent of the total tonnage reported for August, showed an increase of 13.6 per cent over the previous month, and a 25 per cent increase over August, 1938. The majority of merchandise haulers reporting increases attributed the improvement to a general upswing in business.

Despite the general increase in movement of general merchandise, a few carriers reported decreases occasioned by railroad rate reductions, particularly in Southwest territory, and unexpected suspension of operations due to labor troubles, according to the A. T. A.

Petroleum products represented 13 per cent of the total tonnage reported, and showed increases of 14.9 per cent and 26.3 per cent, respectively, over July, 1939, and August, 1938.

Due largely to factory shutdowns in preparation for production of new models, transportation of automobiles in August declined 37.5 per cent under the previous

month. The current figure, however, was 33.3 per cent ahead of August, 1938.

Movement of iron and steel showed increases of 10.7 per cent over July and 20.1 per cent over the corresponding month last year. Nevertheless, traffic falling within this classification continued 20.2 per cent below the 1936 monthly average.

Included in the total tonnage reported were figures on special and seasonal movement of tobacco, textile products and household goods. These groups reported combined increases of 38.3 per cent above July and 22.4 per cent above August, 1938.

Army's Business is National Defense, Not Transport Employees Declare

The Mutual Transportation Committee—representing railroad employees (predominantly in the Southeast) who are actively opposing the federal invasion of transportation with its canalized rivers and barges—met in Atlanta on September 22 and adopted a resolution reading in part as follows:

"We again call upon our representatives in Congress, and upon all good citizens, to put a halt to the numerous wild, extravagant, socialistic and economically unsound projects that have been put forth, which, if carried out, would result in the pouring out of untold millions of dollars of federal funds for waterway improvements and developments, which almost entirely benefit large and wealthy corporations, referring especially to the projects included in the pending Rivers and Harbors Act.

"We again express our strong disapproval of the continuation of the federal government, at the expense of its citizens, in the transportation business on the several rivers of the country through the medium of the Inland Waterways Corporation; and we demand that our representatives in Congress take steps to liquidate this enterprise and stop further waste;

"We call upon our representatives in Congress to so move as to bring about the elimination of the U. S. War Department, Corps of Engineers, from the duty of estimating traffic requirements and otherwise attempting to qualify as traffic experts, in considering the necessity for waterway projects; that this duty be placed upon the Interstate Commerce Commission; that no waterway project or improvement shall be approved until it has received the sanction of the Interstate Commerce Commission, by means of a certificate of public convenience and necessity; and that all the energies of the U. S. Army be devoted toward that task for which they are best qualified, the public defense of the Nation, instead of being diverted to these other channels."

Freight Car Loading

Loading of revenue freight for the week ended September 23 totaled 814,828 cars, the Association of American Railroads announced on September 28. This was an increase of 9,095 cars, or 1.1 per cent above the previous week, an increase of 145,124 cars, or 21.7 per cent above the corresponding week in 1938, but a decrease

of 22,057 cars, or 2.16 per cent below the same week in 1937.

As reported in last week's issue, the loadings for the previous week ended September 16, totaled 805,733 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading			
For Week Ended Saturday, September 16			
Districts	1939	1938	1937
Eastern	166,346	133,480	158,467
Allegheny	154,911	118,916	162,643
Pocahontas	60,443	50,071	56,154
Southern	114,088	100,276	114,249
Northwestern ..	125,571	94,301	139,466
Central Western ..	125,290	109,452	126,357
Southwestern ..	59,084	53,667	65,459
Total Western Districts	309,945	257,420	331,282
Total All Roads	805,733	660,163	822,795
Commodities			
Grain and grain products	50,112	35,896	35,953
Live stock	19,384	16,728	17,964
Coal	154,725	121,411	145,789
Coke	8,754	5,740	10,542
Forest Products ..	35,137	30,986	39,555
Ore	56,454	27,446	69,065
Merchandise l.c.l. ..	162,856	156,808	172,506
Miscellaneous	318,311	265,148	331,421
September 16 ..	805,733	660,163	822,795
September 9 ..	667,409	568,707	708,202
September 2 ..	721,748	648,029	801,539
August 26	688,591	620,557	783,476
August 19	674,237	597,884	777,150

Cumulative Total
37 Weeks ..22,776,199 20,772,543 27,465,204

In Canada.—Car loadings for the week ended September 16 totaled 71,274 (the highest in any week since 1931). In the comparable week last year loadings totaled 56,580 and in the preceding week they were 60,572 (the figures being those of the Dominion Bureau of Statistics).

Total for Canada:	Total Cars Loaded	Total Cars Rec'd from Connections
Sept. 16, 1939	71,274	26,852
Sept. 9, 1939	60,572	19,865
Sept. 2, 1939	65,314	20,701
Sept. 17, 1938	56,580	20,249
Cumulative Totals for Canada:		
Sept. 16, 1939	1,689,434	797,980
Sept. 17, 1938	1,665,029	740,786
Sept. 18, 1937	1,823,518	983,195

Atlantic States Advisory Board to Meet October 5

The Atlantic States Shippers Advisory Board will hold its 50th regular meeting at the Robert Treat hotel, Newark, N. J., October 5. Chief items on the tentative docket which the approximately 500 business and railroad representatives will consider concern means to be taken to secure the maximum efficiency and usage from all available cars in view of an expected upswing in business activity. C. J. Good-year, traffic manager of the Philadelphia & Reading Coal & Iron Co., will give a detailed picture of economic conditions facing the coal industry in the eastern United States and will discuss the urgent need for prompt release of open top cars therefor. Other subjects include: "The Needs of Commerce for Car Supply in the Present Emergency;" "Railroad Rates vs. Motor Truck Rates;" "Suggestions for Tariff Simplification;" a report by special committee of seven on procedure before railroad rate bureaus; "Liberalization of Demurrage Rules" and a report on the free transportation of dunnage used for bracing, blocking, etc., of carload freight loaded in box cars.

The luncheon will honor about 40 "old timers" who were prominent in the organization of the board 15 years ago and who have subsequently retired from active service. F. H. McGuigan, Prudential Insurance Company of America, will present the luncheon address entitled "Some Views on the Railroad Industry From an Investor's Standpoint."

The preceding day, October 4, will be devoted to committee meetings and the evening session given to loss and damage prevention matters. In this connection R. W. Krantz, regional traffic manager, Sears Roebuck & Co., will discuss the possibility of a permanent school in the field of freight loss and damage prevention. J. M. Heath, freight claim agent, Lehigh Valley, will discuss the value of a caution mark campaign and R. A. Fasold, special representative, freight claim division, A. A. R., will take on the problem of over and astray freight bearing marks showing more than one location of shipper.

Initial Hearing on B. & O. Interest Plan Closes

The first formal hearing on the 6,400-mile Baltimore & Ohio's interest modification plan under the Chandler Act, before a three-judge United States district court in Baltimore, Md., of which the first day's proceedings were reviewed in last week's issue, closed late on September 20. Counsel for the road and a minority group of bondholders opposing the plan were given ten days to submit briefs. At the close of argument, the court raised the question whether the provision of the Chandler Act requiring data on the railroad's management under the interest plan is fulfilled by the statement in the plan that the present management is to remain unchanged. Counsel for the road expressed the opinion that the plan possibly carries out the provision of the act.

Daniel Willard, president of the B. & O. for nearly 30 years, who appeared on the closing day, was of the opinion that business recovery will enable the road not only to pay its fixed and contingent interest charges as provided in the plan, but to earn in addition a substantial surplus. He pointed out that for 37 years prior to 1938 the B. & O. did not skip interest and other obligations when due in any year. From 1931 to 1937, inclusive, the income available for fixed charges averaged \$31,838,943 per annum, or about \$842,000 less than was required after allotment for depreciation of equipment. Considering the 14-year period 1924 to 1937, the average income available for charges was \$43,365,305, or about \$12,000,000 more than needed to cover.

Discussing the "elasticity of expense" in running a railroad, Mr. Willard testified that it is possible to vary the expenses of a large road like the B. & O. as much as four or five million dollars a year. Thus if the management had known at the beginning of 1937 what the course of business was going to be, it could very well have reduced expenses and materially cut its losses.

George M. Shriver, senior vice-president, expressed the opinion that the road may be forced into receivership or trusteeship if the opposition of minority bondholders suc-

Eight Months N. O. I. Is \$269,349,356

Class I railroads in the eight months of 1939 had a net railway operating income of \$269,349,356 which was at the annual rate of return of 1.72 per cent on their property investment, according to reports filed by the carriers with the Bureau of Railway Economics of the Association of American Railroads and made public on September 28.

Class I roads in August, 1939, had a net railway operating income of \$54,586,246, or 2.01 per cent, on investment, compared with \$45,421,781, or 1.67 per cent in August, 1938, and \$94,327,471 or 3.33 per cent in August, 1930.

ceeded in blocking fulfillment of the plan. He testified that holders of 87.9 per cent of the affected securities have assented and that interests holding but \$5,343,000 out of the total of \$542,840,000 par value have voiced dissent. Holders of about \$60,000,000 have remained non-committal. In explanation, Mr. Shriver pointed out that about \$20,000,000 of the road's securities are held abroad, the holders of which have been difficult to reach. He also testified that the cost of preparing the plan and reaching bondholders was about \$600,000, all of the work being done directly by the railroad company.

Brother Whitney Pans "Ominous" Transportation Bill

A. F. Whitney, president, Brotherhood of Railroad Trainmen, announces his complete opposition to the Transportation bill now being considered by a joint committee of the two legislative branches in Washington, D. C., in a 6½-page editorial appearing in the September issue of the "Railroad Trainman." Calling the Omnibus transportation bill the "Ominous" bill, Mr. Whitney attacks the measure as inimical to the interest of railroad workers chiefly by its encouragement of consolidation and rate freedom. He reveals that he, "realizing that the transportation bills, if enacted, would probably result in widespread railroad consolidations, with a possible loss of 200,000 jobs for railroad workers," directed Brother Byrl A. Whitney to meet with state legislative representatives of the brotherhood on July 18 and make plans "to do everything possible to bring about defeat of the House Transportation bill (i.e. the house subcommittee substitute for Senate bill 2009). This action, he claims, succeeded in pushing through the house the Harrington amendment providing that no co-ordination or consolidation "shall be approved by the Commission if such transaction will result in unemployment or displacement of employees of the carrier or carriers, or in the impairment of existing employment rights of said employees."

The brotherhood president then attacks Congressman Clarence Lea because of his introduction of the Transportation bill and his remarks in Congress concerning "a

limited group" in the ranks of railroad labor "that seems to be against whatever the others propose". He also makes reference to the recent election of Joseph B. Eastman as chairman of the Interstate Commerce Commission. Of this he writes: "The Ominous Transportation Bill was designed to give Joe Eastman a free hand to slaughter railroad jobs in America." Finally, he utters a declaration of policy for the brotherhood beginning, "We shall not stultify ourselves by abandoning considerations of public welfare in exchange for 'rosy-tinted' promises from Wall Street interests."

Following the editorial are excerpts from the Congressional Record containing debate on the Harrington amendment and a reprint of a speech by William M. Pierce, Congressman from Oregon, which opposes the Transportation bill on the argument that it is the fruit of the railroad lobbyists; that it is a hasty job; that no one wants the bill made a law except "Wall Street" and lastly that the bill is designed to "kill" water transportation in which the government has already invested over \$2,000,000,000.

N. E. Board Hears Chairman Joe

(Continued from page 496)

of the policies which they seem inclined to pursue do them more harm than good."

He also discussed the role of the I. C. C. in the task. He declared that the function of government is not simply that of an umpire, to stop evil destructive and competitive practices, but also to promote different methods of transportation and the use of each for the purpose for which it is best fitted. He referred to the recent reorganization of the Commission along departmental lines as a second step in an attempt to revivify the organization; the first step he referred to was the provision of new building and air-conditioning for the body. As to his own recent election as chairman for a three-year term he said that he was not the "boss" of the commission but his duties were to be those largely of a presiding officer.

W. H. Day, manager, Transportation bureau, Boston Chamber of Commerce, referred to the work of an Emergency committee of the board in connection with a recent wash-out on the northern section of the Boston & Maine. He pointed out that the traffic officers of the road, when service was interrupted, immediately got in touch with him as chairman of the Emergency committee outlining in detail just what had happened, the corrective remedies being applied and what efforts were being made to assure movement of freight. The committee immediately put all of the information in a circular for mailing to members. As a result of the work, Mr. Day said, the committee and the Boston & Maine received a number of letters from shippers to the effect that as a result of the information in the circular they were able to keep on the rails traffic which they would otherwise have diverted to other mediums of transportation.

The chief topic of the meeting of the board was whether the railroads have familiarized themselves with the marketing problems of the industries they serve. Mr. Day, as the first participant in the discussion, reviewed results of the questionnaire which he has recently sent to the membership of the New England Traffic League asking specifically: (1) whether or not rail carriers have ever approached you or your members along the lines in question; (2) whether or not, in your opinion, such effort offers the opportunity for some constructive work? Out of 143 letters sent out Mr. Day has received to date 100 replies. Of the number replying 70 indicated that through the life of their business they had never been approached by a railroad with respect to their marketing problems or whether they had any ideas of improvement in transportation service. A sizeable number also expressed the thought there was a real field for exploration on the part of the railroad and the shippers acting jointly. He asked that a committee of six, made up of three representatives of the Railroad Contact committee, and three of the Executive committee, be appointed for the purpose of considering what might be done on the subject. The motion was carried.

Track Supply Exhibit at Roadmasters' Convention

Forty-five manufacturers of equipment and materials used in the construction and maintenance of tracks, under the auspices of the Track Supply Association, presented an exhibit of their products in connection with the convention of the Roadmasters Association at the Hotel Stevens, Chicago, on September 19-21, the exhibit being held in the exhibition hall of the hotel immediately adjacent to the convention meeting room. The exhibit was exceeded in size in recent years only by that of 1937, when 53 companies participated.

The officers of the Track Supply Association, who arranged for and were responsible for the exhibit were: President, Lem Adams, Oxweld Railroad Service Company, Chicago; first vice-president, R. J. McComb, Woodings-Verona Tool Works, Chicago; second vice-president, E. C. Argust, Morden Frog & Crossing Works, Chicago; secretary-treasurer, Lewis Thomas, Q and C Company, Chicago; directors, R. M. Blackburn, Buda Company, Chicago; Jess Mossgrove, Austin-Western Road Machinery Company, Aurora, Ill., (ex-officio); H. C. Mull, Warren Tool Corporation, Warren, Ohio; H. M. McFarlane, O. F. Jordan Company, East Chicago, Ind.; F. P. Cullen, Cullen-Friedstedt Company, Chicago; W. W. Fitzpatrick, Nordberg Manufacturing Company, Chicago; and H. C. Hickey, The Rail Joint Company, Inc., Chicago.

In the election of officers for the ensuing year, Mr. McComb was advanced to president and E. C. Argust to first vice-president; Mr. Blackburn was elected second vice-president, and Mr. Thomas was re-elected secretary-treasurer. The new directors elected were Geo. Morrow, Reade Manufacturing Company, Inc., Chicago; F. H. Philbrick, Power Ballaster Corporation, Chicago; and J. C. Rinehart, Eagle Grind-

ing Wheel Company, Chicago.

A list of the exhibitors, together with the products on exhibit and the names of their representatives, follows:

Air Reduction Sales Company, New York; welding and cutting equipment; oxygen and acetylene regulators; pipe welding, rail cropping, butt-welded rail; built-up rail joints; flame cleaning torch—C. B. Armstrong, A. W. Brown, C. A. Daley, J. F. Franzen, J. W. Kenefic, L. C. McDowell, U. F. Portell, E. F. Turner and M. M. Weist.

Alcoma Railway Equipments, Chicago; Neal tie pullers, movies of tie puller, Evertite rail joint—C. O. Bradshaw, E. C. Neal and Geo. Neal.

American Fork & Hoe Company, Cleveland, Ohio; rail anchors; tapered rail joint shims; shovels; weed cutters, forks, rakes, scuffle hoes; broom rakes; axes; hammers, scythes—H. S. Johnson, D. L. O'Brien, John Steel and R. J. Whalen.

Armco Railroad Sales Company, Middletown, Ohio; sample of pipe; sub-drainage charts and photographs—R. Y. Barham, E. T. Cross and E. Harbeck.

Barco Manufacturing Company, Chicago; gasoline tie tampers; gasoline hammer—F. N. Bard, W. J. Belhke, C. O. Jenista, W. T. Jones, J. L. McLean, C. L. Mellor and F. B. Nugent.

Buda Company, Harvey, Ill.; section motor car; inspection motor car; mechanical tie tamper; switch stand; bonding drill; track drill; track liner, rail bender; journal jacks; track jacks; hydraulic jacks, pole jacks, and tie spacers—H. C. Beebe, R. M. Blackburn, H. S. Brown, R. B. Fisher, F. L. Gormley, W. H. Haas, R. K. Mangan, Wood Sanford and G. A. Secor.

Creepcheck Company, Inc., Chicago; rail anchors—T. D. Crowley, N. A. Howell.

Crerar, Adams & Co., Chicago; track and bonding drills; track tools; wrenches; handles and track gages—H. Besant, Geo. J. Doyle, A. Kopala, I. E. Poehler and J. M. Temple.

Cullen-Friedstedt Company, Chicago; moving pictures of Burro locomotive crane in operation; rail tongs—K. J. Beller, L. B. Bertaux, C. J. Bronez, E. V. Cullen, F. J. Cullen, F. P. Cullen, T. G. Frazee, G. H. Goodell, Robert W. Jamison, F. L. Kendig and Jos. F. Leonard.

deSanno & Son, A. P., Philadelphia, Pa.; Radiac grinding wheels—D. F. Madigan, L. G. Martin, E. J. Rohan and W. K. Whelan.

Duff-Norton Manufacturing Company, Pittsburgh, Pa.; track jacks; power jacks; journal jacks; automatic lowering jacks; tie spacers—C. N. Thulin and E. E. Thulin.

Eagle Grinding Wheel Company, Chicago; grinding wheels—John Abram, L. E. Buckingham, R. S. Lloyd and J. C. Rinehart.

Elastic Rail Spike Corporation, New York; elastic rail spikes—C. M. Bernuth, William A. Fisher, A. C. Jack and B. Kuckuck.

Electric Tamper & Equipment Company, Ludington, Mich.; electric tie tampers—H. W. Cutshall, J. F. Hensel, C. Jackson, L. S. Osborn, G. L. Walters and J. M. Webb.

Fairmont Railway Motors, Inc., Fairmont, Minn.; inspection cars; section car—C. P. Benning, W. D. Brooks, Kenneth Cavins, W. G. Day, Arthur R. Fletcher, C. H. Johnson, W. F. Kasper, J. T. McMahon, V. Pagett, H. W. Protzeller, C. L. Rager, W. H. Rinken, H. A. Sly, Ira Sublett and William Williamson.

Hayes Track Appliance Company, Richmond, Ind.; models of bumping post and wheel stops—S. W. Hayes, S. W. Hayes, Jr., Herbert J. Mayer and John H. Sullivan.

Illinois Malleable Iron Company, Railroad division, Chicago; rail anchors—Chas. G. Ericson, Dayton T. Hogg, John C. Kuhns and H. A. Morean.

Jacobson Manufacturing Company, Racine, Wis.; motor scythe; power lawn mower; gasoline motors—Martin Christensen and A. H. Roper.

Jordan Company, O. F., East Chicago, Ind.; model and pictures of spreader ditcher—A. W. Banton, O. L. Champion, J. C. Forbes, H. M. McFarlane and C. W. Shipley.

Kalamazoo Railway Supply Company, Kalamazoo, Mich.; one-man inspection car; light section motor car; signal maintainer car; motor-car wheels; and track gage and level—Ralph E. Keller, Frank E. McAllister, E. C. Poehler and P. J. Robischung.

Link-Belt-Speeder Corp., Chicago; photograph of shovels, locomotive cranes—L. R. Spillan and N. A. Weston.

Lundie Engineering Corporation, New York; tie plates; tie tongs—L. B. Armstrong and O. W. Youngquist.

Maintenance Equipment Company, Chicago; switch point protector; rail and flange lubricator; derail; and literature on rail layer—D. M. Clarke, E. Overmier, T. E. Rodman, R. J. Shanahan and P. A. Wells.

Mall Tool Company, Chicago; equipment for railroads includes gasoline and electric rail grinders; cross slotters; concrete vibrators and surfacers; bridge and building machines; gasoline and electric saws; gasoline and electric drill; power wrenches; flexible shaft grinders and polishers—W. H. Guppy, J. Innes, A. W. Mall, F. A. McGonigle and M. Rhenquist.

Metal & Thermit Corporation, New York;

Thermit-pressure rail welds; electric welding rods—A. Lucas, W. B. Sharav and C. D. Young.

Morden Frog & Crossing Works, Chicago; heat-treated forged compromise joints; adjustable rail braces; and miscellaneous forged fittings for switches—E. C. Argust, W. Homer Hartz, Charles Kane, G. F. Killmer, L. I. Martin and L. C. Reeb.

Nordberg Manufacturing Company, Milwaukee, Wis.; rail grinders; track power drill; power track wrench; utility rail grinders; surface grinders; precision grinders; accessories—C. P. Clemmens, W. W. Fitzpatrick, C. K. Jenssch and H. H. Talboys.

Northwestern Motor Company, Eau Claire, Wis.; bridge and building gang car; all service section car; all service section car chassis; light all service car; one-man inspection car—F. W. Anderson, Otis B. Duncan, Geo. H. Goodell, C. E. Murphy, A. H. Nelson, Geo. Prest and W. J. Roehl.

Oxweld Railroad Service Company, Chicago; oxy-acetylene welding and cutting apparatus; oxygen; acetylene; carbide; actual examples of battered joint reconditioning; rail butt welding; angle bar welding; switch point welding; frog welding; application of switch point protectors; and heat-treating of rail ends—Lem Adams, D. Arnold, M. C. Beymer, G. P. Bogert, M. Burnett, Jr., W. E. Campbell, F. J. Duffie, F. M. Finstwait, H. V. Gigandet, E. B. Hall, Jr., R. A. Heaney, W. A. Hogan, S. B. Hopkins, P. Hunter, Jr., Wm. Leighton, G. B. Moynahan, D. H. Pittman, J. H. Rodger, H. W. Schulze, J. C. Stephenson, F. C. Teichen and J. E. Winslow.

P. & M. Company, Chicago; rail anti-creeper and bond-wire protectors; and tie plate assemblies—S. M. Clancy, J. S. Gallagher, J. L. Grant, D. T. Hallberg, G. E. Johnson, J. E. Mahoney, W. A. Maxwell, F. A. Preston, Max K. Ruppert and G. T. Willard.

Pettibone Mulliken Corporation, Chicago; mechanical switchman; switch stands; hub stands and hub safety switch stands—J. H. Asselin, A. R. Hearl, C. A. Johnson, Carl Landberg, G. R. Lyman, W. E. Olds and G. J. Slibeck.

Pocket List of Railroad Officials, New York; copies of Pocket List of Railroad Officials—H. A. Brown and B. J. Wilson.

Positive Rail Anchor Company, Chicago; rail anchors; guard-rail plates and braces; adjustable rail braces—L. C. Ferguson and R. J. Platt.

Power Ballaster Company, Chicago; motion pictures of power track ballaster and power track cribbing machine—W. E. Bugbee, Ralph Payne, F. H. Philbrick, L. L. Schreck and Stanley H. Smith.

Q & C Company, New York; guard-rail clamp; switch-point guard; compromise joints; derail; gaging tools; wheel stops; rail tongs; gage rods; flangeway guard; adjustable rail brace; electric switch heater—G. H. Goodell, L. E. Hassman, E. J. Hetsch, G. Prest and Lewis Thomas.

Rail Joint Company, Inc., The, New York; insulated rail joints; standard joints; compromise joints; and fibre insulation—V. C. Armstrong, E. W. Backes, Alex Chapman, W. E. Gadd, Harry C. Hickey, G. H. Larson, J. N. Meade, R. W. Payne and Thomas Ryan.

Rails Company, The, New Haven, Conn.; M. & L. compression track fastening; compression screw spike; full throated cut spike; oil, gas and electric switch heaters; track lubricator; spring spike; head contact insert for reconditioning of rail joints—R. E. Bell, L. T. Burwell, G. M. Hogan, J. V. Westcott.

Railway Engineering and Maintenance, Chicago; copies of *Railway Engineering and Maintenance* and *Railway Age*—G. E. Boyd, M. H. Dick, L. R. Gurley, S. W. Hickey, N. D. Howard, Elmer T. Howson, F. C. Koch, H. E. McCandless, H. A. Morrison, J. S. Vreeland.

Railway Track-Work Co., Philadelphia, Pa.; portable track grinders; stock rail grinders; flexible shaft grinders; portable drill grinders; accessories; grinding wheels—H. M. Moorhead and A. M. Nardini.

Ramapo Ajax Division, American Brake Shoe & Foundry Co., New York; switch stands; rail lubricators—T. E. Akers, W. Bender, G. A. Carlson, G. M. Cooper, J. E. Davidson, R. E. Einstein, H. Hazelton, R. M. Helms, Darcy F. Hilton, P. Hoffman, J. V. Houston, A. F. Huber, J. S. Hutchins, W. Janicki, J. P. Kleinkort, E. F. Needham, R. W. Payne, W. A. Peddle, H. W. Renick, J. A. McVickers, S. A. McVickers and W. Perdue.

Reade Manufacturing Company, Inc., Jersey City, N. J.; literature and photographs on weed control—D. M. DeWitt, Geo. Morrow, C. A. Parish, Charles H. Reade and Charles F. Reade.

Templeton, Kenly & Co., Ltd., Chicago; track-bridge and journal jacks; tie spacer; rail puller and expander—W. C. Cornu, H. C. Dilzian, R. B. Hill, W. H. Kreer, P. H. McManus, William Simpson, J. B. Templeton and W. B. Templeton.

Warren Tool Corp., Warren, Ohio; Flex-Toe claw bar—W. H. Bon, Howard Mull, O. W. Youngquist.

Woodings-Verona Tool Works and Woodings-Forge & Tool Company, Verona, Pa.; rail anchors; spring washers; and triflex springs—James McComb, R. J. McComb, G. L. McKewin, J. M. Moore, E. Woodings and W. H. Woodings.

Wooley Machine Company, Minneapolis, Minn.; tie-cutting machine; switch heater—A. J. Franke, A. C. Heath and H. E. Woolery.

Equipment and Supplies

Milwaukee to Spend \$10,000,000

The Chicago, Milwaukee, St. Paul & Pacific will ask the federal district court for permission to spend \$10,000,000 for locomotives, freight cars and rails, financing to be done in part by the sale to the Reconstruction Finance Corporation of equipment trust certificates. Ten 4-8-4 type freight locomotives will be purchased from the Baldwin Locomotive Works, 2000 50-ton box cars will be built in company shops, and 30,000 tons of rails and necessary fastenings will be purchased for use in 1940. Work on the new box cars will be started upon completion of 1,000 50-ton box cars now being built in its Milwaukee shops.

Burlington Schedules Heavy Repair Program

A heavy repair program scheduled by the Chicago, Burlington & Quincy for the balance of 1939 involves 71 locomotives and 4,812 freight cars. So far this year, 106 locomotives and 3,890 freight cars have undergone heavy repairs. In the latter, the construction of 182 new 50-ton box cars is included.

The 71 locomotives to be repaired include nine 2-10-4 Texas type, which will be converted to high speed freight locomotives by the application of roller bearings to the engine trucks, drivers, tender trucks and valve motion, light weight rods, reciprocating parts and valves and other improvements; two 4-6-4 Hudson type which will be converted to high speed passenger locomotives by the application of roller bearings to drivers, trailers and valve motion, light weight rods and light weight reciprocating parts and valves and other improvements; and three 4-6-4 Hudson type and three 4-8-4 Mohawk type, which will be improved by the application of light weight rods, light weight reciprocating parts and valves. The freight car program for the entire year is as follows:

	Repairs completed to Sept. 1, 1939	Repairs to be completed balance of year
New 50-ton box cars built...	182	...
Repair box cars.....	1,436	1,864
Modernize auto loaders in auto cars	150	200
Raise roofs and modernize auto loaders in auto cars .....	...	161
Repair composite gondolas...	1,273	1,000
Lengthen and repair flat cars	100	...
Repair stock cars.....	542	427
Repair 16-door steel gondolas .....	...	497
Repair mill type gondolas...	...	600
Repair C & S steel gondolas	207	63
	3,890	4,812

The New Equipment for Canadian Pacific

The Canadian Pacific is asking for bids on equipment including 12 locomotives of the G-3-F Class Pacific type, for general utility service primarily for fast freight service, also for emergency passenger service; 12 of the P2-G Class, Mikado type, for heavy moderate speed freight

service; 1,000 box cars of 40-tons' capacity; 100 automobile cars to be equipped with staggered side automobile doors also with end doors; 200 refrigerator cars of 35-tons' capacity with new overhead ice tank construction and equipped with heaters utilizing propane gas; 10 mail and express cars 70-foot long with 30-foot mail compartment; 32,297 tons of rail consisting mainly of 85-lb. and 100-lb. sections for service in Canada and 1,328 of 100-lb. rail for service on the United States lines.

LOCOMOTIVES

THE NORFOLK & WESTERN will build 10 locomotives of the 2-8-8-2 type in its own shops.

THE CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC has ordered 10 locomotives of the 4-8-4 type from the Baldwin Locomotive Works.

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE has placed an order with the Russell Snow Plow Company, for a Russell all-steel snow plow with wing elevators and flangers.

THE ERIE has asked the federal district court for authority to purchase seven Diesel-electric switching locomotives; three 125-ton, 1,000-hp. from the Electro-Motive Corporation and four 100-ton, 600-hp. from the American Locomotive Company.

THE BOSTON & MAINE has ordered one locomotive of the 4-8-2 type from the Baldwin Locomotive Works. This is in addition to the order for two locomotives reported in the *Railway Age* of September 2, page 358.

CHICAGO, BURLINGTON & QUINCY.—The directors of this road on September 27 approved an equipment program which includes the purchase of 10 4-8-4 type freight and four Diesel-electric passenger locomotives. The company will also buy or build 100 flat cars.

CITY OF RICHMOND, VA.—Sealed bids will be received at the office of G. M. Bowers, director of public works, Richmond, until 3:00 p. m. (e.s.t) October 5, for one 25-ton Diesel-mechanical heavy-duty locomotive and for one 50-ton Diesel-electric heavy-duty locomotive.

IRON AND STEEL

THE UNION PACIFIC plans to lay 100,000 tons of 131-lb. rails in 1940.

THE GULF, MOBILE & NORTHERN has ordered 1,420 tons of rails and 200 tons of track fastenings from the Tennessee Coal, Iron and Railroad Company.

THE SOUTHERN has ordered 26,000 tons of rails, 10,600 tons of tie plates and 1,400 tons of joint bars from the Tennessee Coal Iron and Railroad Company.

THE NORTH-WESTERN OF BRAZIL has placed an order for 23,000 tons of rail, which was divided equally between the United States Steel Corporation and the Bethlehem Steel Company. Negotiations are being conducted by the Export-Import

Bank of Washington, D. C., for the purchase of an additional 70,000 tons of rail.

THE CHICAGO GREAT WESTERN has been authorized by the federal district court to spend \$1,156,565 on additional maintenance and improvements. Of the total, \$838,000 is for rails and fastenings.

THE ST. LOUIS-SAN FRANCISCO has filed a petition with the federal district court asking permission to spend \$682,032 for the purchase of 112-lb. rails and accessories to relay 60 miles of track.

FREIGHT CARS

THE CHICAGO GREAT WESTERN is inquiring for 100 flat cars of 50 tons' capacity.

THE CHICAGO & ILLINOIS MIDLAND is inquiring for 100 hopper cars of 70 tons' capacity.

THE LOUISIANA & ARKANSAS is inquiring for from 250 to 500 steel box cars of 50 tons' capacity and 40 ft. 6 in. long; also for 250 to 300 steel box cars of 50 tons' capacity and 50 ft. 6 in. long.

THE NEW YORK CENTRAL, reported in the *Railway Age* of September 23, page 456, as planning to purchase 3,500 hopper cars and 500 box cars, has ordered this equipment from the Despatch Shops, Inc.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—The federal district court at Chicago has authorized the trustees of the Chicago, Milwaukee, St. Paul and Pacific to spend \$139,300 to enlarge 398 freight cars to accommodate 1940 model automobiles.

THE CHICAGO & NORTH WESTERN has ordered 500 70-ton hopper cars from the Pullman-Standard Car Manufacturing Company and 300 50-ft. box cars from the Mt. Vernon Car Manufacturing Company. Inquiry for this equipment was reported in the *Railway Age* of August 26.

THE DELAWARE & HUDSON has placed orders for 1,000 all-steel hopper cars of 50 tons' capacity, divided equally between the American Car & Foundry Co. and the Bethlehem Steel Company. Inquiry for this equipment was reported in the *Railway Age* of September 2, page 358.

THE DELAWARE, LACKAWANNA & WESTERN is preparing specifications and plans to ask for bids on 1,100 freight cars. The new cars will augment the equipment expansion program recently started by the Lackawanna to rebuild 600 coal cars in its Keyser Valley shops, Scranton, Pa., with the forces working full time.

THE NORFOLK & WESTERN has ordered 1,500 hopper cars; they were divided 500 each to the Virginia Bridge Company, the Ralston Steel Car Company, and the Bethlehem Steel Company. This is in addition to the 2,000 cars recently ordered by this company and reported in the *Railway Age* of September 23, page 457.

THE UNITED STATES NAVY DEPARTMENT, BUREAU OF SUPPLIES AND ACCOUNTS, reported in the *Railway Age* of September

9, page 386, as asking for bids for 15 steel underframe flat cars, 8 steel flat bottom gondola cars and 8 steel sheathed box cars, opened bids for this equipment on September 19. The Haffner-Thrall Car Company was the low bidder on the 15 flat cars also on 8 gondola cars, and the American Car & Foundry Co. submitted the lowest bid on the box cars.

THE ERIE has placed orders for 1,500 freight cars; an inquiry for freight cars was reported in the *Railway Age* of September 16, page 425. The orders were divided as follows:

Number	Type	Capacity Tons	Builder
500	Box	50	American Car Fdy.
200	Box	50	Pullman-Standard
200	Hopper	50	Pullman-Standard
500	Hopper	50	General American
250	Gondola	70	Greenville Steel
50	Flat	70	Youngstown Steel

THE ILLINOIS CENTRAL, reported in the *Railway Age* of September 23, page 456, as inquiring for 2,500 freight cars has ordered this equipment, having placed 750 50-ton gondola cars with the General American Transportation Corp.; 750 50-ton hopper cars with the Pullman-Standard Car Manufacturing Company; 500 40-ton box cars with the American Car & Foundry Company and 500 40-ton box cars with the Mt. Vernon Car Manufacturing Company.

Supply Trade

B. H. Lawrence, chief engineer, has been elected vice-president in charge of engineering, **United States Steel Corporation of Delaware**, and member of its executive committee and board of directors.

Howard B. Brown, who has been associated with the Pitcairn Company, has been elected secretary of the Pittsburgh Plate Glass Company, Pittsburgh, Pa., to succeed Carl S. Lamb, deceased.

Joseph M. Brown, formerly representative for the National Twist Drill & Tool Company, Detroit, Mich., has been placed in charge of railway sales of the Sterling Products Company, Chicago, which handles Sterling products.

Horace Zimmer, assistant district manager of the **General Electric Company**, transportation department, in the New York territory, has been appointed manager of the department, succeeding **C. F. Scott**, who has retired after more than 37 years of active service with the company. Mr. Scott's services will continue to be available on important company negotiations.

L. T. Johnston, vice-president of the Armco Railroad Sales Company, Middletown, Ohio, has been elected president and general manager, and **E. T. Cross**, formerly general manager of the Ingot Iron Railway Products Company, whose railroad sales were taken over by the Armco Railroad Sales Company on July 1, has been appointed assistant general manager of the Armco Railroad Sales Company, with headquarters, as before, at Middletown, Ohio.

Financial

CENTRAL OF NEW JERSEY.—Trackage Rights.—This road is studying the possibility of obtaining trackage rights over the Lehigh Valley between Bethlehem, Pa., and Phillipsburg, N. J., according to E. W. Scheer, president, at the annual meeting of the road's stockholders on September 22. This plan has been suggested in order that the company may have a route between the two points should it abandon its present lease of the Lehigh & Susquehanna from the Lehigh Coal & Navigation Co., which line it now operates between Phillipsburg and Scranton, Pa., paralleling the Lehigh Valley in great part.

CHESAPEAKE & OHIO.—Scrip Certificates.—The time within which this company's scrip certificates may be exchanged for shares of preference stock, series A, has been further extended to October 1, 1941, by a recent order of Division 4 of the Interstate Commerce Commission.

CHESAPEAKE & OHIO.—Equipment Trust Certificates.—This company has asked the Interstate Commerce Commission for authority to assume liability for \$4,200,000 of 2½ per cent equipment trust certificates, maturing in 10 equal annual installments of \$420,000 on October 1, in each of the years from 1940 to 1949, inclusive.

Extension of Maturity of Bonds.—The Covington & Cincinnati Elevated Railroad & Transfer Bridge has asked authority of the commission to extend the date of maturity of \$3,090,000 of first mortgage five per cent gold bonds from October 1, 1937, to March 1, 1992. The bonds were issued and are outstanding under the company's first mortgage dated October 1, 1887.

In connection with the same transaction the Chesapeake & Ohio has asked authority to sell \$1,039,000 and to issue and sell \$1,036,000 of general mortgage 4½ per cent gold bonds of 1892, which will mature on March 1, 1992.

CHICAGO & NORTH WESTERN.—Abandonment.—Division 4 of the Interstate Commerce Commission has modified its order of February 20, 1939, authorizing this company to abandon operation of a line extending from Bain, Wis., to Harvard, Ill., so as to permit it to resume operation over that part of the line extending from Bas-setts, Wis., to Hebron, Ill., 12.5 miles.

CHICAGO & NORTH WESTERN.—Authority to Hold Positions Granted.—Rowland L. Williams has been authorized by Division 4 of the Interstate Commerce Commission to hold the positions of chief executive officer of the Chicago & North Western and director and president of the Chicago, St. Paul, Minneapolis & Omaha. Mr. Williams was formerly vice-president of the Chicago & Eastern Illinois.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Abandonment.—After granting a certificate authorizing this company to abandon a portion of a branch line extending from engineer's station 496 plus 85, in Sauk City, Wis., to the end of the line

in Prairie du Sac, Division 4 of the Interstate Commerce Commission, after having received a resolution of protest from the Village Board of Prairie du Sac, has vacated the certificate and has reopened the case and assigned it for hearing at some future date.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Compensation of Counsel.—Division 4 of the Interstate Commerce Commission has ordered that A. N. Whitlock be paid at the rate of \$18,000 a year for his services as counsel to the trustees of this company. Mr. Whitlock succeeds O. W. Dynes as counsel to the trustees.

CHICAGO, ROCK ISLAND & PACIFIC.—Abandonment and Operation.—Examiner R. R. Molster of the Interstate Commerce Commission has recommended in a proposed report to the commission that Division 4 find

1. That the present and future public convenience and necessity require the operation by this company, under trackage rights over the Davenport, Rock Island & North Western between Shaffton, Iowa, and Davenport, 23.9 miles, and over tracks of the Chicago, Milwaukee, St. Paul & Pacific in Davenport, 0.5 mile; permit abandonment by the Rock Island of parts of a line of railroad between Shaffton, Iowa, and Bennett, 35.1 miles, and between Tipton, Iowa, and Elmira, 15.6 miles; and permit abandonment by the Clinton, Davenport & Muscatine of its entire line between Davenport, Iowa, and Clinton, 33.1 miles, as to interstate and foreign commerce, and of operation, under trackage rights, over lines of the Tri-City in Davenport, 1.6 miles, and over the Clinton Street in Clinton, 1.2 miles.

2. That acquisition by the Davenport, Rock Island & North Western of parts of the Clinton, Davenport & Muscatine, when abandoned, for use in reaching industry tracks, falls within the exceptions provided in section 1 (22) of the Interstate Commerce Act, and that the application should be dismissed.

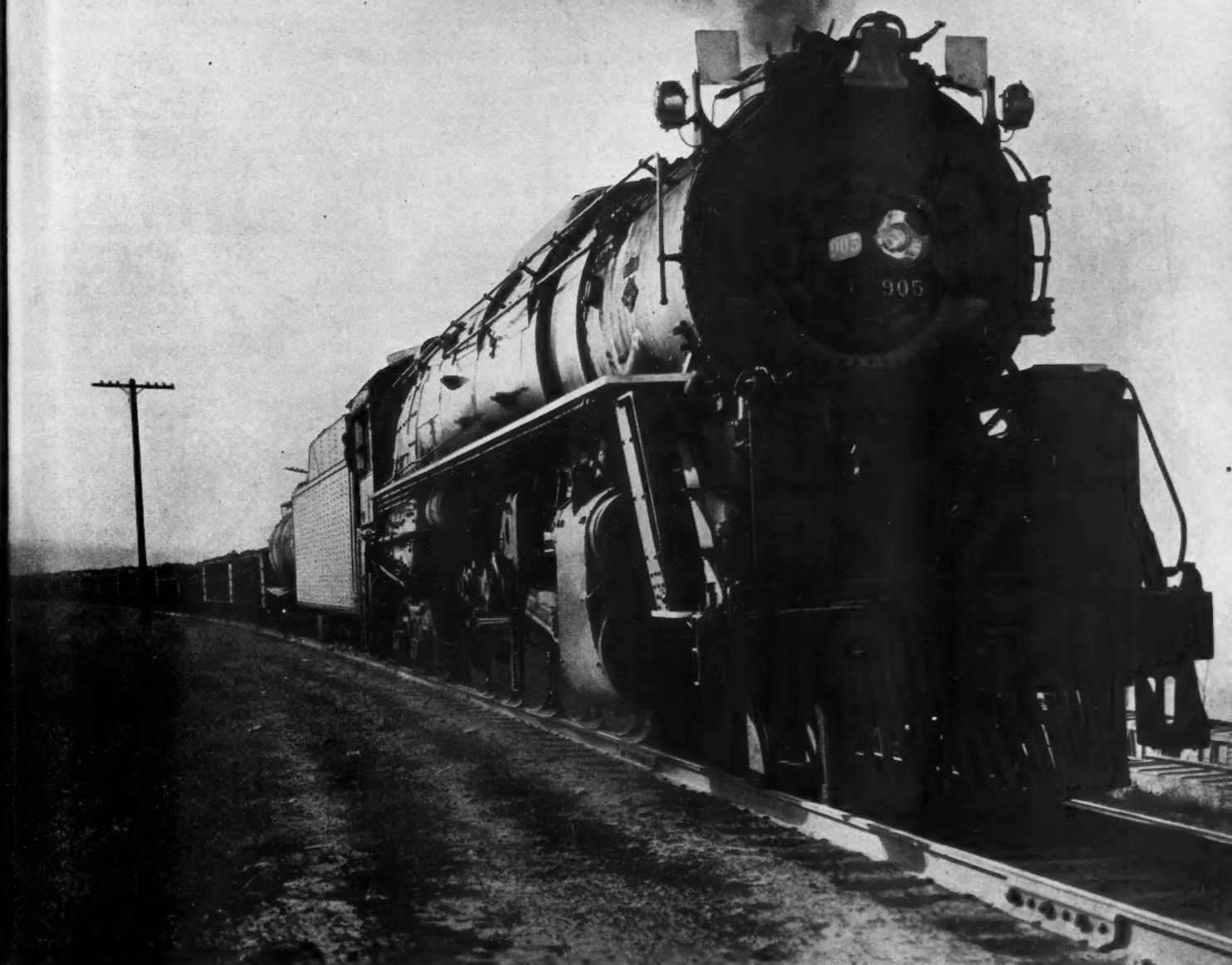
CLACKAMAS EASTERN.—Abandonment.—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon as to interstate and foreign commerce its entire line extending from Clackamas, Oreg., to Swift, 17 miles.

ERIE.—New director elected.—Carl Howe, vice-president (traffic) of this road, has been elected a director, succeeding Stephen Birch of Mahwah, N. J., resigned.

ERIE.—Withdrawal of Application of Chicago & Erie.—Because of the substitution of the parent company, the Erie, for its subsidiary, Division 4 of the Interstate Commerce Commission has dismissed the application of the Chicago & Erie to acquire control of the Cleveland & Mahoning Valley by purchase of the capital stock.

LOUISIANA & ARKANSAS.—Abandonment.—Division 4 of the Interstate Commerce Commission has ordered that this company be substituted for the Louisiana, Arkansas & Texas in the application of the latter for authority to abandon a line

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extending from Farmersville, Tex., to McKinney, 16.1 miles. This was made necessary because of the acquisition of the L. A. & T. by the L. & A.

KISHACOQUILLAS VALLEY.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon its line extending from Belleville, Pa., to Reedsville, 9.2 miles, and from Reedsville, Pa., to Lewistown Junction, over tracks leased from the Pennsylvania, seven miles.

MAINE CENTRAL.—*Acquisition.*—This company has asked the Interstate Commerce Commission for authority to purchase the properties and franchises of the Dexter & Newport and the Dexter & Piscataquis.

MINNEAPOLIS & ST. LOUIS.—*Trackage Rights.*—The Minneapolis & St. Louis Railroad has asked the Interstate Commerce Commission for authority to acquire trackage rights over the lines of the Minneapolis & St. Louis Railway between Hopkins, Minn., and Minneapolis, 6.7 miles. This application grows out of the plan now pending before the commission to divide the M. & St. L. into two parts.

MISSOURI PACIFIC.—*Acquisition and Operation.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to acquire and operate a portion of a line formerly owned by the Fort Smith & Western extending from an existing connection with a track of the Missouri Pacific at or near Wheeler Avenue to the south line of Byrne Avenue, one mile, together with all connecting tracks, side tracks, switches, and appurtenances, all in the city of Fort Smith, Ark.

NEW YORK CENTRAL.—*Delisting of Stock of the Michigan Central.*—The Securities & Exchange Commission has granted an application of the New York Stock Exchange to strike from listing and registration the \$100 par value capital stock of the Michigan Central. The application pointed out that the distribution of this security is so inadequate as to make further dealings in it on the Exchange inadvisable. The order for delisting became effective at the close of business on September 25.

NEW YORK CENTRAL.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon the so-called Stony Clove and Kaaterskill branch, extending from Phoenicia, N. Y., to Kaaterskill, 19.2 miles, and the Hunter branch, extending from Kaaterskill Junction, N. Y., to Hunter, 2.7 miles.

NORFOLK SOUTHERN.—*Charter for New Company.*—The Virginian Corporation Commission, on September 19, issued a charter to the Norfolk Southern Railway to operate as successor to the Norfolk Southern Railroad, which has been in receivership since July 28, 1932. Organization of the new company is a preliminary move to taking over the properties of the present company. Officers named in the articles of the association are: President,

Morris S. Hawkins, co-receiver of the present Norfolk Southern; Secretary, J. R. Pritchard, present assistant secretary; Treasurer, J. F. George, present treasurer for the receivers, and Counsel, Col. W. B. Rodman.

NEW YORK, NEW HAVEN & HARTFORD.—*Notes of the Union Freight.*—The Union Freight has been granted authority by Division 4 of the Interstate Commerce Commission to issue a promissory note or notes for \$192,000, to be delivered at par to the trustees of the New York, New Haven & Hartford to evidence a loan for a like amount, the proceeds to be applied to track renewals.

PENNSYLVANIA.—*Asks bids for equipment trust certificates.*—This road invited bids for the purchase of \$8,865,000 of equipment trust certificates to finance the construction of 2,500 freight cars and 20 electric passenger locomotives, the total cost of which will be approximately \$11,820,000. The certificates, known as Series J, will be dated October 1, and will mature in 15 installments of \$591,000 each, the last maturity date being October 1, 1954. Dividends will be at the rate of 2¾ per cent.

These purchases constitute a portion of the \$17,000,000 improvement program announced in the *Railway Age* of September 16, page 425.

The company has asked the Interstate Commerce Commission for authority to assume liability for the issue.

RAILWAY EXPRESS AGENCY.—*New director elected.*—L. W. Baldwin, chief executive officer of the Missouri Pacific, was elected a director of the Agency on October 26, succeeding A. D. McDonald, president of the Southern Pacific.

SEABOARD AIR LINE.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a branch line of railroad extending from Adamsboro Junction, S. C., to Adamsboro, 1.9 miles.

SOUTHERN.—*Abandonment by the Virginia & Southwestern.*—Division 4 of the Interstate Commerce Commission has authorized the Southern to abandon the operation and the Virginia & Southwestern to abandon the line extending from Bristol, Tenn., westerly to Bluff City, 12 miles.

SOUTHERN PACIFIC.—*Acquisition and Abandonment by the Central Pacific.*—The Southern Pacific has asked the Interstate Commerce Commission for authority to abandon the operation and the Central Pacific has asked for authority to abandon the line extending from Redding, Calif., to Delta, 37.1 miles. At the same time the Central Pacific and the Southern Pacific respectively have asked the commission for authority to acquire and operate a line now being constructed by the United States Government from Redding, Calif., to Delta, 30.1 miles. This acquisition and abandonment is occasioned by the construction by the Department of the Interior of the Shasta Dam and the Central Valley Project in this territory which will result in the flooding of the tracks of the Central

Pacific which are operated by the Southern Pacific.

VIRGINIA BLUE RIDGE.—*Abandonment.*—This company has requested authority from the Interstate Commerce Commission to abandon a line extending from Massies Mill, Va., to Woodson, 3.6 miles.

WESTERN PACIFIC.—*Reorganization.*—The Interstate Commerce Commission has refused to further modify its final plan of reorganization for this company. The commission points out that the fixed charges and other requirements under the plan as modified last June 21, amounted to more than \$2,000,000 a year and that there is no justification for modifying its basic finding in this respect. The commission also said that there was no justification for changing the relationship of fixed debt to total capitalization, nor of altering the allocations of these securities proposed by the plan.

Dividends Declared

Philadelphia & Trenton.—\$2.50, quarterly, payable October 10 to holders of record September 30.

Average Prices of Stocks and Bonds

	Sept. 26	Last week	Last year
Average price of 20 representative railway stocks..	36.24	32.98	23.68
Average price of 20 representative railway bonds..	60.06	59.26	55.99

Construction

ATCHISON, TOPEKA & SANTA FE.—Contracts totalling approximately \$157,000 have been awarded for the remodeling of a building in the 18th street yard of the Santa Fe at Chicago, which will be used as a service building in connection with the new coach yard at that point. The general contract was awarded to the Ellington-Miller Company, Chicago, plumbing to Thos. Conlin, Chicago, heating to the Phillips Getschow Company, Chicago, and electric wiring to the Super Electric Construction Company, Chicago.

CANADIAN NATIONAL.—A contract has been let to Greenlaw & Estey, Millville, N. B., for the construction at Campbellton, N. B., of a 250-ton coaling plant of reinforced concrete, which will serve two lines of tracks with four coaling chutes. Coal will be elevated by a flight conveyor system with a capacity of 50 tons an hour.

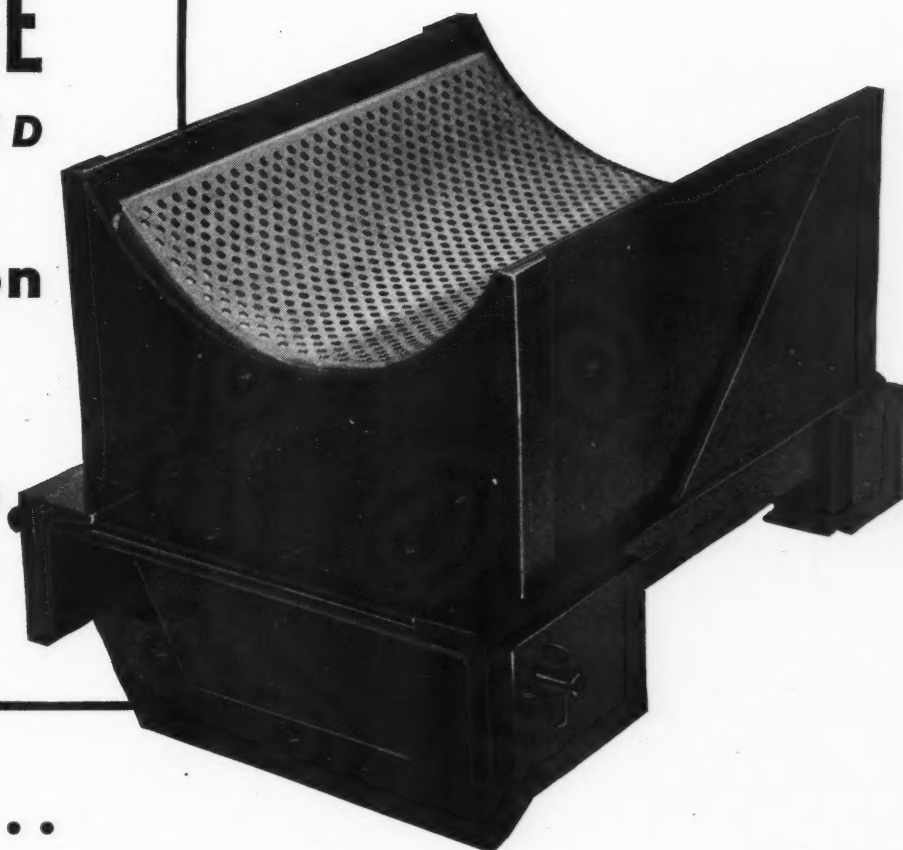
CANADIAN NATIONAL.—A contract has been let to Arthur Nadeau, Chandler, Que., to build a new station at Chandler, of frame construction, shingle and drop-siding, asphalt shingle roof, on concrete foundation 24 ft. by 48 ft. The station will contain baggage and express room, men's and women's waiting rooms, and agent's office. Heating will be by hot water system.

CANADIAN NATIONAL.—A contract has

Continued on next left-hand page

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pinch the cellar. This results in the cellar having proper clearance in the box at all times. The hub end wall, which is integral with the spreader, brings the perforated plate closer to the hub and provides better hub lubrication. » » » Specify the Franklin No. 8 Combined Lubricator & Spreader for replacements or for new power.



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NEW YORK

CHICAGO

MONTREAL

been let to T. E. Rousseau, New Carlisle, Que., for the construction of a diversion about 1300 ft. long which has been undertaken in conjunction with a highway diversion at the same location which eliminates two objectionable level crossings. The revised highway location will lie between the railway and the shore. The grading of the railway diversion consists almost entirely of the removal of a rock cutting.

ELKHART & SANTA FE.—Division 4 of the Interstate Commerce Commission has ordered that the time within which this company shall complete the construction of a line of railroad in Cimarron County, Okla., and Union and Colfax Counties, N. Mex., be extended from January 1, 1940, to January 1, 1942.

GREAT NORTHERN.—Work has been started on improvement of facilities at the freight depot in Minneapolis, Minn., which will cost approximately \$150,000. These improvements consist of the construction of 10,000 sq. yd. of concrete driveway, 2,600 ft. of transfer platform of wood construction and attendant track changes.

LOUISVILLE & NASHVILLE.—This road will construct an electrically-operated drop pit at Decoursey, Ky., and will install remote control for an interlocking tower at Louisville, Ky. Both projects will involve an expenditure of more than \$20,000.

MISSOURI PACIFIC.—This company has asked the Interstate Commerce Commission for authority to construct eight miles of new track in a southwesterly direction from Tallulah, La.

MISSOURI PACIFIC.—A contract has been awarded Lonsdale Brothers, Kansas City, Mo., amounting to about \$50,000 for the construction of a brick power house, foundations for a new power plant, a 100-ton overhead coal bunker and coal conveying equipment at the East Bottoms roundhouse in Kansas City, adjoining the existing engine room. The new power plant will be equipped with two 600-hp. vertical boilers of the three drum, vent tube type.

MOBILE & OHIO.—This road will soon call for bids on the dismantling of a wood shed 78 ft. by 792 ft. and the erection of a new steel fruit house and dock 81 ft. by 562 ft. at Mobile, Ala., which will be leased to the United Fruit Company and in which that company will install its own banana-handling machinery.

OMAHA UNION STATION.—The latest type of escalators will be installed in the Union Station at Omaha, Neb., at a cost of approximately \$125,000, as soon as contracts can be awarded. The cost of the improvement will be borne by seven participating railroads.

TEXAS & PACIFIC.—A contract amounting to approximately \$65,000 has been awarded Frank Parrott, Dallas, Tex., for the construction of a train shed and pedestrian subways at the passenger station at Marshall, Tex. This work was announced in the *Railway Age* of September 9.

Railway Officers

EXECUTIVE

C. C. McKereghan, auditor of the Minnesota Northwestern Electric, has been appointed assistant to the trustees of the Duluth, South Shore & Atlantic, with headquarters at Minneapolis, Minn.

A. J. Chester, whose election as vice-president-operation of the Texas & Pacific, with headquarters at Dallas, Tex., was announced in the *Railway Age* of September 23, was born at Jackson, Tenn. on January 1, 1880. Mr. Chester entered railway service in September, 1897, as a clerk in the local freight office of the Mobile & Ohio at Jackson, Tenn., and in May, 1898, he went with the Nashville, Chattanooga & St. Louis as a clerk, ticket seller and cashier at Jackson. For a short period in 1903, he served as a clerk on the Illinois Central at Jackson, returning to the M. & O. in July, 1903. In July, 1908, he was promoted to agent at Corinth, Miss., and two months later he was transferred to Jackson. In August, 1914, he was appointed traveling freight agent and commercial agent, with headquarters at Jackson, and in October, 1917, he went with the Texas & Pacific and the International Great Northern as agent at Ft. Worth, Tex. He was later appointed service supervisor of the T. & P. at Dallas, Tex. and in March, 1920, he was promoted to general agent at Fort Worth. Mr. Chester was advanced to superintendent of car service, with headquarters at Dallas, in October, 1920, and in September, 1925, he was appointed superintendent of transportation with the same headquarters. In August, 1926, he was appointed division superintendent, with headquarters at Alexandria, La., and in February, 1928, he was promoted to general superintendent, with headquarters at Dallas, Tex. In May, 1931 he was appointed superintendent at Fort Worth, and in May, 1936, he was again advanced to general superintendent, with headquarters at Dallas. Mr. Chester was further advanced to general manager, with headquarters at Dallas, in September, 1937, the position he held until his recent promotion.

Charles Barham, vice-president and traffic manager of the Nashville, Chattanooga & St. Louis, has been appointed vice-president-traffic, with headquarters as before at Nashville, Tenn., a change in title, and **William K. Tate**, assistant president, has been promoted to assistant vice-president-traffic, with headquarters as before at Nashville. **W. S. Hackworth**, assistant real estate agent, with headquarters at Nashville, has been promoted to assistant to president, with the same headquarters, succeeding Mr. Tate.

Mr. Tate was born at Tyler, Tex., on January 13, 1898, and attended Vanderbilt University, Nashville. He entered railway service on March 13, 1917, with the N. C. & St. L. as a draftsman in the engineering department, later serving as instrumentman

and topographer on a survey party. On January 1, 1918, he was advanced to assistant division engineer on the Huntsville division, with headquarters at Tullahoma,



William K. Tate

Tenn., holding this position until October 1, 1918, when he volunteered for service in the United States Army, serving at the Officers Training Camp at Fort Monroe, Va. On December 1, 1918, he returned to his former position with the N. C. & St. L. at Tullahoma, and on March 16, 1929, he was promoted to industrial engineer in the industrial and public relations division of the traffic department, with headquarters at Nashville. On January 1, 1935, he was placed in charge of the industrial and public relations division, with the same title and in the spring of 1936, he was appointed assistant to the vice-president and traffic manager. Mr. Tate was further advanced to assistant to the president, with headquarters as before at Nashville, in August, 1937, holding that position until his recent promotion.

FINANCIAL, LEGAL AND ACCOUNTING

H. C. Carrington has been appointed insurance commissioner of the Canadian National, with headquarters at Montreal, Que., succeeding **William Y. Muirhead**, whose death on September 4 was reported in the *Railway Age* of September 9.

OPERATING

William G. Miller has been appointed assistant to the chief operating officer of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Minneapolis Minn.

George H. Nolan, assistant superintendent of the Stevens Point division of the Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Ironwood, Mich., has been appointed trainmaster, with headquarters at Minneapolis, Minn.

Herman F. Schmidt has been appointed superintendent of the Duluth, South Shore & Atlantic and the Mineral Range railroad, with headquarters at Marquette, Mich., succeeding to the duties of **Christian E. Urbahns**, general manager, who



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MEXICO

One of the four most important aqueducts in the Republic of Mexico is the Los Remedios Aqueduct, which brings potable water into Queretaro from La Canada at San Pedro, a distance of $4\frac{3}{4}$ miles. This aqueduct is composed of 74 arches and stands 96 ft. above the floor of the valley. Two well preserved inscriptions on the wall of one of the terminals, advise the curious that the work was begun in 1726, during

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will retire on October 1, and **Bernhardt J. Pederson** has been appointed trainmaster at Marquette. The position of general manager, with headquarters at Marquette, will be abolished.

Mr. Urbahns was born at Valparaiso, Ind., on November 3, 1870, and entered railway service in 1885 as a telegraph operator on the New York, Chicago & St. Louis (Nickel Plate). On December 1, 1891, he was promoted to train dispatcher and on May 23, 1902, he was advanced to night chief train dispatcher. On April 1, 1904, he went with the Wisconsin Central (now part of the Minneapolis, St. Paul & Sault Ste. Marie), as chief train dispatcher at Fond du Lac, Wis., and on January 1, 1906, he was promoted to trainmaster. Mr. Urbahns was advanced to assistant superintendent on April 26, 1907, and on April 10, 1911, he was promoted to superintendent at Stevens Point, Wis. He was further advanced to general superintendent with headquarters at Minneapolis, Minn., on May 1, 1902, and in April, 1929, he was appointed general manager of the Duluth, South Shore & Atlantic and the Mineral Range, with headquarters at Marquette.

George F. Orlemann, trainmaster on the Chicago Great Western at St. Paul, Minn., has been promoted to acting superintendent, with the same headquarters, succeeding **A. A. Freiburger**, who has been granted a leave of absence because of illness.

J. F. Connolly, assistant superintendent, Montreal terminals, of the Canadian National, has been appointed superintendent, Montreal terminals, with headquarters at Montreal, Que. **J. A. O. Boivin** has been appointed assistant superintendent, Montreal terminals.

Oscar Masse, whose appointment as superintendent of transportation of the Quebec district of the Canadian National at Quebec, Que., was noted in the *Railway Age* of September 9, was born at Coteau, Que., on November 6, 1884. He commenced railway service in 1901 as freight



Oscar Masse

clerk with the Grand Trunk at Coteau and later became operator at Coteau Junction. After serving at Montreal in the same capacity, he was transferred in 1908 to Is-

land Pond, Vt., as despatcher, which position he later held at Montreal. In 1918 he became assistant trainmaster at Richmond, Que., then going to Montreal as despatcher. In 1922 Mr. Masse was appointed terminal inspector, subsequently becoming trainmaster and assistant superintendent at Montreal. In 1927 he was appointed inspector of transportation at Toronto, Ont., and was appointed superintendent of the Levis division at Levis, Que., in 1936, which position he held until his recent appointment.

A. J. Elder, general superintendent on the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Milwaukee,



A. J. Elder

Wis., has been promoted to assistant general manager of the Eastern lines, with headquarters at Chicago, effective October 1, succeeding **Norman A. Ryan**, whose promotion to general manager of the Western lines, with headquarters at Seattle, Wash., was announced in the *Railway Age* of September 23. Mr. Elder was born at Pierson, Iowa, on January 8, 1892, and entered railway service in April, 1907, as a call boy on the Milwaukee at Perry, Iowa, later becoming a telegraph operator. He was promoted to train dispatcher in 1912, and in 1917 was advanced to night chief dispatcher. Mr. Elder was advanced to chief dispatcher in 1918, and in 1921, he was promoted to trainmaster of the Milwaukee terminals. In 1925, he was further advanced to assistant superintendent of the Twin City terminals, with headquarters at Minneapolis, Minn., and the following year he was promoted to superintendent of the Sioux City and Dakota division, with headquarters at Sioux City, Iowa. Mr. Elder subsequently served as division superintendent at Terre Haute, Ind., Marion, Iowa and Savanna, Ill., and on September 1, 1938, he was promoted to general superintendent, with headquarters at Milwaukee.

TRAFFIC

J. O. Gaither, general agent on the Gulf, Mobile & Northern at New Orleans La., has retired.

Ernest J. Peters, district passenger agent on the Southern Pacific lines in

Texas and Louisiana at Houston, Tex., has been appointed general baggage, mail and express agent, with the same headquarters, effective October 1, to succeed **R. L. McKibbin**, who will retire on that date.

J. E. Clark, city representative for the Pere Marquette at Chicago, has been promoted to general agent at that point, a newly created position.

Harold E. Gustofson, traveling freight agent on the Fort Dodge, Des Moines & Southern at Boone, Iowa, has been promoted to general agent at Des Moines, Iowa, replacing **L. E. Anderson**.

J. M. Vonau, Jr., chief passenger rate clerk on the Southern Pacific lines in Texas and Louisiana at Houston, Tex., has been promoted to assistant general passenger agent in charge of rates and tariffs at that point.

J. O. Hamilton, assistant general freight agent on the Kansas City Southern at Kansas City, Mo., will retire effective October 1, and **E. C. Worthley**, general agent at Minneapolis, Minn., has resigned to engage in other business.

R. L. Nichols, traveling freight and passenger agent on the Chicago, Burlington & Quincy, at Seattle, Wash., has been promoted to general agent at Spokane, Wash., replacing **Homer A. Bradt**, whose death on September 4, is announced elsewhere in these columns.

T. H. Murray, division freight and passenger agent on the Atchison, Topeka & Santa Fe at San Bernardino, Cal., has been promoted to assistant general freight and passenger agent at Phoenix, Ariz., succeeding **F. L. Hanna**, who will retire on October 1.

E. M. Fogarty, whose promotion, effective October 1, to general freight agent on the Atchison, Topeka & Santa Fe at



E. M. Fogarty

Chicago, was announced in the *Railway Age* of September 23, entered Santa Fe service at Streator, Ill., in 1911, and was made chief night clerk at Corwith, Ill., in 1917. After serving in the World War, Mr. Fogarty returned to the Santa Fe and specialized in freight rates. He was trans-



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ferred to the traffic department in 1922, and became city freight agent at Chicago. He was appointed division freight agent there in 1935, and assistant general freight agent at Topeka in 1938, the position he held until his recent promotion.

Clark Davis, whose promotion to assistant to vice president on the Atchison, Topeka & Santa Fe, with headquarters at Chicago, was announced in the *Railway*



Clark Davis

Age of September 23, was born on August 7, 1888, and entered the service of the Santa Fe in 1907, in the general auditor's office at Topeka, Kan. Leaving Topeka in 1920, he worked a few months in Kansas City, Mo., and then became traveling freight agent at Hutchinson, Kan. In 1923, he was promoted to division freight agent at Hutchinson, and in 1930, to assistant general freight agent at Topeka. Mr. Davis was advanced to general freight agent, with headquarters at Chicago, in March, 1938, which position he has held until his recent promotion.

John R. Mills, whose appointment as assistant to the vice-president in charge of traffic of the Kansas City Southern and the Louisiana & Arkansas, with headquar-



Moore Studio

John R. Mills

ters at Kansas City, Mo., was announced in the *Railway Age* of September 23, was born near Sherman, Tex., on February 20,

1874, and at the age of 13 began work as a messenger for the Kansas City, Fort Scott & Memphis (now part of the St. Louis-San Francisco) at Kansas City. Later he entered the employ of the Atchison, Topeka & Santa Fe at Las Vegas, N. M., and a year later, in 1894, returned to the Kansas City, Fort Scott & Memphis. On June 1, 1901, he went with the Kansas City Southern as a rate and divisions clerk and, after filling various positions in the traffic department, was promoted to assistant general freight agent on March 1, 1909. On May 1, 1929, he was promoted to assistant freight traffic manager, and in November, 1937, he was further advanced to freight traffic manager, with headquarters at Kansas City, the position he held until his recent promotion.

M. F. Sanderson has been appointed division freight agent, freight and passenger departments, for the Southern, with headquarters at Memphis, Tenn. **H. V. Gardner** has been appointed general agent, freight and passenger departments, for the same road, at Los Angeles, Calif.

J. C. Kirk, general freight agent of the Nashville, Chattanooga & St. Louis, has been appointed freight traffic manager, with headquarters as before at Nashville, Tenn., a newly created position. **W. H. Wharton**, assistant general freight agent at Nashville, has been promoted to general freight agent, with the same headquarters, in charge of service and solicitation and **F. A. Burke**, assistant general freight agent at Nashville, has been advanced to general freight agent, with the same headquarters, in charge of rates and divisions.

ENGINEERING AND SIGNALING

J. E. Rogan, division engineer on the Illinois Central, with headquarters at McComb, Miss., has been promoted to trainmaster of the New Orleans Terminal, with headquarters at New Orleans, La., a newly created position.

John B. Whiting, master carpenter on the Chicago, Rock Island & Pacific, with headquarters at Kansas City, Mo., has been promoted to division engineer, with headquarters at Des Moines, Iowa, succeeding **L. J. Hughes**, who has been transferred to Chicago.

John R. Caswell, division engineer of the Smith's Falls division of the Quebec district of the Canadian Pacific, with headquarters at Smith's Falls, Ont., has been appointed acting assistant district engineer of the Ontario district, with headquarters at Toronto, Ont., effective August 24. Mr. Caswell replaces **A. O. Wolff**, who had previously been appointed acting district engineer of the New Brunswick district, with headquarters at St. John, N. B., succeeding **C. C. Kirby**, who had been granted a leave of absence because of ill health. **Walter R. Benny**, assistant engineer in the office of the engineer maintenance of way at Toronto, has been appointed division engineer of the Schreiber division of the Algoma district, with headquarters at Schreiber, Ont., succeeding **J. G. Sutherland**, who has been transferred to the

Smith's Falls division, as noted in the *Railway Age* of September 9.

SPECIAL

R. R. Horner, publicity assistant of the Norfolk & Western, has been appointed managing editor of the Norfolk & Western Magazine, effective October 1. Mr. Horner will have general supervision of the magazine and advertising departments, and will continue to carry on the publicity work in which he has been engaged.

OBITUARY

Thomas W. Hulme, who retired on September 1, 1938, as vice-president of the Pennsylvania, in charge of real estate, valuation and taxation, with headquarters at Philadelphia, Pa., died in the Bryn Mawr hospital on September 23, after a short illness. He was 71 years of age.

T. J. Skillman, chief engineer-consultant, of the Pennsylvania, with headquarters at Philadelphia, Pa., died on September 24 at his home in Ardmore, Pa., at the



T. J. Skillman

age of 62. Mr. Skillman was born in Trenton, N. J., on November 6, 1876, and was graduated from Princeton University in 1898, with a Civil Engineering degree. He entered the service of the Pennsylvania at Jersey City, N. J., in March, 1899, as a blue-print boy and four months later was appointed rodman on an engineering corps. He became division engineer at Cape Charles, Va., in June, 1913, and a year later was transferred to Camden, N. J., in the same capacity. In April, 1917, Mr. Skillman was appointed division engineer of the Monongahela division at Pittsburgh and in July of that year was assigned to a special study of terminal developments at New York. In March, 1920, he was appointed chief engineer maintenance of way at Chicago, and in July, 1926, was transferred to the Long Island as chief engineer. On February 1, 1927, Mr. Skillman was appointed chief engineer of the entire Pennsylvania system, with headquarters at Philadelphia. He was granted a leave of absence in October, 1935, on account of ill health, and a year later was appointed chief engineer-consultant.

The Week at a Glance

A CERTAIN STEEL MAN: The gentleman we have in mind is a big figure in the public eye as a champion of "free enterprise" against government interference. Recently he has scolded other steel manufacturers for reducing prices—ignoring the fact that price competition is the only alternative to the federal "regimentation" he dislikes so thoroughly. Also, this same upholder of private enterprise ships his products at the taxpayers' expense by socialized transportation—namely, the dole-supported inland waterways. We have a few things to say regarding this gentleman and his ilk in the leading editorial herein, which we trust that our friends may find edifying.

OUR INSIDE REDS: When a confessed socialist does something to ruin private business, we oppose him—but we cannot condemn him as either dumb or dishonest. But when a bunch of Chamber of Commerce Babbitts holler their heads off for "free enterprise" and then do their level damndest to ruin private enterprise—their morals and their brains, or both, are plainly under suspicion. In preference to such hypocrites, give us an admitted Red any day in the week. The most important duty of patriotic and intelligent business men is to unmask and dethrone these "inside" Bolsheviks, before they encompass the ruin of private business and their country.

TRUCK TRAFFIC BOOMS: In May truck loadings were the heaviest in history—32.7 per cent higher than in May a year ago.

PARCEL POST RATES DOWN: The post office department wants to reduce its rates on mail-order catalogues, and the I. C. C. (except Commissioner Eastman) says okay. A lot of this business has strayed away from the P. O. and Mr. Farley wants it back. Mr. Eastman demurred because of lack of evidence that the new rates would cover the cost of the service.

TEACHER'S PET BILL: The House Merchant Marine Committee (dominated by waterway fans, as is the Commerce Committee in the Senate) has reported favorably a bill for the regulation of water carriers—by the Maritime Commission instead of the I. C. C. The principal present function of the Maritime Commission is the doling out of subsidies to the water carriers—so, of course, the dole-recipients would rather be "regulated" by that board than by anybody else. The bill is a back-fire scheme in opposition to uniform regulation by the I. C. C. of all agencies of transportation.

ET TU MAHAFFIE?: There is a bill (S. 2610, the "Straight Jacket" bill) before the Senate Committee, instigated by the I. C. C., which would give the regulators detailed authority over all expenditures by railroads' non-operating subsidi-

aries. At a hearing this week Judge Fletcher pointed out that, under the measure's provisions, the Biltmore Hotel in New York would have to get I. C. C. permission to buy a pound of butter. Stout battlers for this increasing I. C. C. power were Joe Eastman and Chuck Mahaffie. Said the latter: *"We have little sympathy with the view that the railroads or other carriers are overburdened with governmental supervision, or that regulation has contributed to the troubles of the railroads."*

25 MILLIONS IN MAY: Net railway operating income in the fifth month was 25 million dollars—or at the magnificent annual rate of 1.3 per cent on the investment. For the five months net earnings have totaled 126 millions—a rate of return, on an annual basis, of 1½ per cent. At this rate, the roads stand to earn only about 400 million for the entire year. Carloadings, though, are beginning to look up.

COUNSEL FROM CREDITORS: There have been plenty of statements from insurance company executives about this or that particular measure—but little expression from them of a constructive attitude to the railroad situation as a whole. But this week one of the best informed of the spokesmen for the railroads' biggest creditors (John W. Stedman of the Prudential) disclosed his views. He favors consolidation, "co-ordination," abandonment of unprofitable lines, taxation equalization for all carriers and the exclusion from the transportation business of companies engaged in other business. He also expressed the view that a new labor policy is necessary for railway recovery.

FORWARDER PROBE: The Senate Interstate Commerce Committee has reported favorably to the Senate the resolution (Senator Clyde Reed's) calling for an investigation by the committee of the operations of the forwarders—and the possibilities of improving the handling of L. C. L. freight. Our Washington editors are of the opinion that the probe will be permitted.

GOOD TECHNICS, BAD ECONOMICS: Technologists have been doing a good job toward improving the living standards of the country—but their performance has been largely nullified by the bungling ineptitude of the zanies who control our economic life. Such was the message to the mechanical officers at their convention this week conveyed by the editor of *Railway Age*. Technological progress, he explained, does not cause unemployment. It is the failure to pass along the benefits of lower production costs to consumers, prohibiting them from commanding more products, that causes the unemployment and which brings on depressions. Stupid attempts by business, labor and government to circumvent economic laws have impoverished the nation.

CHIEF SPENDER: John Carmody, who has heretofore been a subordinate spender of the people's substance as head of the Rural Electrification Administration, has been called to higher functions of the same character as chief of the new "Works Agency," in which will be included the Bureau of Public Roads—who are no amateurs in this pleasant occupation themselves. The chief lender will be Jesse Jones of the R. F. C.—who takes over the chairmanship of the new consolidated government pawnbroking business.

MERGE OR SOCIALIZE: This is the ultimatum to the railroads contained in a speech by Commissioner Carroll Miller reported herein. Mr. Miller says that merger would raise railroad net by 500 millions and thus solve all their financial woes—and it would enable railroad managers to direct their energies to competing with other transportation agencies instead of with each other. An expert in utility affairs, the commissioner believes the railroads are a "natural monopoly" and that competition is no more desirable for them than for other utilities. And, finally, he says the rail carriers are bound to merge anyhow—if they don't do it privately, they'll do it under government ownership.

RESTORE R. R. MONOPOLY?: The railroads have an "area of monopoly" today which they are not recognizing and using. This "area"—while smaller than it was before the coming of the truck—is still big enough to enable the railroads to do a profitable business under it. Such is the contention of this week's installment in the "What Will the Traffic Bear" series.

MORE DATA ON JOINTS: Basic scientific information, on which further track improvement may be built, is continually being accumulated by the laboratory and service tests conducted under the auspices of the Committee on Track Stresses of the A. R. E. A., reported herein.

MECH. PROGRESS: The arch-bar truck will definitely be barred in interchange, a vast number of improved designs of both freight and passenger cars—these were a couple of the recent outstanding mechanical developments enumerated by Chairman Hankins of the Mechanical Division, A. A. R., at the convention of the division in New York this week (reported herein). He also told about several research projects—including those on high-speed trucks, on axles and on locomotive counterbalancing.

HOUSE "KEY" BILL: The House sub-committee had expected to report its counterpart of S. 2009 (the Senate "key" bill) on June 28. There was a last-minute delay, but the bill was momentarily expected as we went to press.

LIGHT-WEIGHT **has traveled far since 1934**

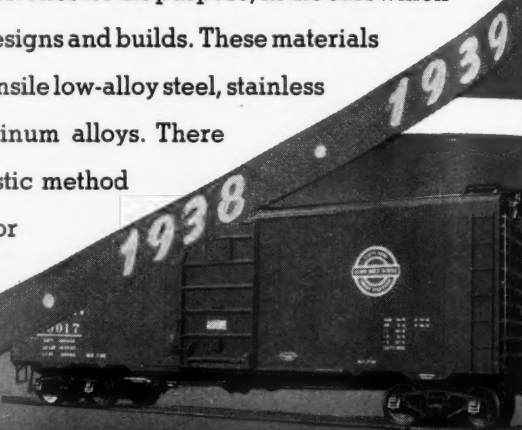
Since Pullman-Standard built the first streamliner in 1934, there has been a steady upward trend in the use of light-weight railway equipment. The car building industry has built and has on order approximately 1186 light-weight passenger cars for the steam railroads and of these Pullman-Standard has received orders for over 73%.

The advantages of light-weight construction are rapidly being recognized in the freight car field and Pullman-Standard recently designed and built 200 box cars, each

weighing 4½ tons less than standard box cars of similar dimensions

PULLMAN is free to choose from all of the available materials, the best ones for the purpose, in the cars which this company designs and builds. These materials include high-tensile low-alloy steel, stainless steel and aluminum alloys. There is no monopolistic method of fabrication for any of them.

Pullman research
is constantly looking
forward to the methods
and materials of
tomorrow



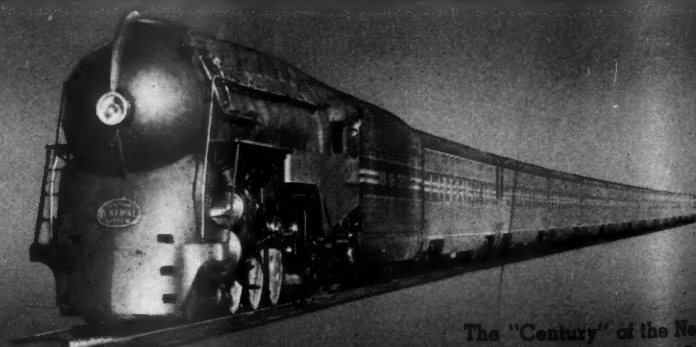
Light-weight welded box car. Effects a saving of 4½ tons of dead-weight



Light-weight modern coach. Built for the Bangor & Aroostook, Boston & Maine, Kansas City Southern, New Haven, Seaboard Air Line, and St. Louis Southwestern.



The "Broadway" of the Pennsylvania. One of the newly equipped trains



The "Century" of the New York Central. One of the new trains including 62 cars built by Pullman

PULLMAN-STANDARD CAR MANUFACTURING COMPANY

CHICAGO • PITTSBURGH • WASHINGTON, D. C. • NEW ORLEANS • CLEVELAND • HOUSTON • BALTIMORE • BIRMINGHAM • NEW YORK • WORCESTER, MASS.
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The Week at a Glance

BABBITS AID NEW DEAL: Business could do with a few more leaders as intelligent and forthright as New Dealer Adolph Berle, who seems to be the brains behind the new federal spending-lending scheme. This wily Brain Truster welcomes the socialism we already have (particularly in transportation) as a structure on which more socialism can be conveniently built—and he and the other New Dealers are proceeding forthwith to do the building. And they will get away with it too (the leading editorial herein contends) unless business men banish the naive idea that they can keep socialism isolated in transportation.

"TRAIL BLAZER": A luxurious streamlined train exclusively for coach passengers will be inaugurated by the Pennsylvania on July 28 between Chicago and New York—operating directly to the World's Fair grounds at the latter point. The New York Central also will inaugurate similar New York-Chicago coach service. The trains will have approximately 17-hour schedules and will feature such items as low-cost meals and free lounge-car service.

90 M. P. H. FAST ENOUGH?: A typical train has to travel 20 miles, even on a slightly descending grade, to get its speed up to 100 m. p. h., whereas it can get up to 90 m. p. h. in only 8 miles. Thus, maximum speeds higher than 90 m. p. h. do very little good in quickening overall schedules—but they do a plenty to track and signal installations. Such, at any rate, is the contention of Assistant General Manager Gillies of the Santa Fe in a paper summarized herein.

WHY "AGREED" CHARGES?: Regulation of highway carriers is not easily feasible in Canada—so the Dominion government has adopted the expedient of freeing the railways of some of their competitive handicaps, enabling them to make "agreed" charges. So C. D. Howe, Dominion transport minister, explained Canada's regulatory program to the accounting officers in session at Toronto last week—as reported in an article herein.

WHY "SQUARE DEAL"?: Following Transport Minister Howe's comments on "agreed charges," the accountants next heard C. E. R. Sherrington (secretary of the British Railways' Research Service) on the subject of the British railways' successful "sale" to the public of its program for largely relieving the railways of rate regulation (the British railways already enjoying the right to make "agreed" charges, trainload rates and other "exceptional" rates).

NO "SQUARE DEAL" FOR U. S.?: If the American railroads get regulatory

equality with their rivals, it will come by regulating those rivals and not by "un-regulating" the railroads. This was the substance of the opinion expressed by A. A. R. Vice-President Bunnell to the accounting convention, following the presentations by Messrs. Howe and Sherrington of the Canadian and British methods of dealing with this problem. Col. R. S. Henry expressed the same opinion, and cited the railroads' experience with the long-and-short-haul clause as proof. Mr. Bunnell emphasized in particular the necessity for regulating private carriers by barge and truck, who charge their customers the common-carrier rate and pocket the difference.

NEW Q SLEEPERS: Two sleeping cars (described and illustrated in this issue) have been delivered to the Burlington for its Denver Zephyr trains. Each car provides five different classes of accommodations (roomette, bedroom, compartment, drawing room and "chambrete"—this last being a single-occupancy cubicle intermediate in desirability between a roomette and a bedroom).

FAST L. C. L. ON P. R. R.: The Pennsylvania's overnight l. c. l. service in both directions between New York and Philadelphia to the East and Pittsburgh to the West is described in an illustrated article herein. Trucks assemble and distribute the traffic, so that a wide territory at either end of the line and at intermediate points is included in this rapid service—which is accomplished by steady running, rather than by spectacular speeds.

THIRD QUARTER TRAFFIC: Carloadings in the third quarter this year ought to run about 10 per cent ahead of the same period last year, according to the estimate of the Regional Advisory Boards. The improvement will be spotty though—the Boards looking for an increase of 37 per cent in the Northwest and 30 per cent in the Great Lakes area, while they foresee virtually no increase in the Southwest and actual decreases in the Central Western and Missouri-Kansas areas.

R. R. REGULATION ILLEGAL?: Congress has no specific constitutional power to regulate railroads—all the Constitution says is that it may regulate commerce between the states. So when Congress ham-strings the railroads while paying no attention to the interstate commerce moving by unregulated agencies, it is stretching its authority to the breaking point in the former case and ignoring it entirely in the latter. Such, in substance, was the interesting contention made by Vice-President Saunders of the Southern Pacific in an address last week at the traffic clubs San Francisco meeting, reported herein.

DROWNING THE RAILROADS:

One reason why the railroad situation is so much tougher than it ever was before is that the government has been at least 10 times busier than it ever was before in extending its socialistic waterway competition with the railroads. Since 1822 the federal government has whooped off three billion dollars on river and harbor projects and *more than half of that three billion dollars has been spent in the last ten years.* Just think of it—the brainy wonders in Washington wait until a time when we have already got more transportation plant than we know what to do with, and then they proceed to whoop off three billion money in 10 years to add to socialized transportation plant than had been expended in the entire preceding century. And, to top it all off, the Senate Waterway spenders have now got a program in mind to dwarf all that have gone before.

ADJ. BOARD PARLEY: The union chiefs made clear to railroad managements at a conference last week that they will not peaceably submit to public criticism by railroad managements of the awards being handed out so lavishly by referees of the Adjustment Board. They do not insist upon an attempt to bar the press from Adjustment Board hearings, but they do not want the reporters to get at any facts beyond those which they can glean by attending routine sessions of the Board. A joint committee has been named to canvass the points of difference between the railroads and the unions on this question, but it does not seem to have been clearly decided whether this committee's first job is to remove the injustices of the present set-up or whether, on the other hand, its chief function is to be that of a cop to keep railroad managers from talking too much.

TAX PER CENT MOUNTS: In the first five months of the five years ended with 1929, the tax collector took away 28 per cent of the net money the railroads made. In these months of the five years ended with 1934, the tax collector's take climbed to 42 per cent and, in the first five months of the five years just past, the tax take was 46 per cent of the net money left after paying operating expenses.

HANDWRITING ON THE WALL:

The demand for some control of "private" transportation is growing like a snowball. Commissioner Miller brought up this question in his Stevens Institute address reported in our last week's issue. Elsewhere herein we give you the statement of the former president of the California Railroad Commission in which he says that "some arrangement will have to be made to regulate the hundreds of thousands of property-carrying trucks now using the highways as plant facilities."

BEEF STAYS ON THE HOOKS OF ARMOUR CARS

Here, in refrigerator service, is a test of the smooth riding qualities of cars equipped with Simplex Snubbers, for . . . "beef down," caused by rough riding cars is a source of damage and loss.

Simplex Snubbers have solved the "beef down" problem for Armour . . . that is why over 5,500 Armour cars are equipped with them. *There have been no instances on any of these cars where meat has been torn from the hooks since these cars have been equipped with Simplex Snubbers.*

But . . . Simplex Snubbers give more than a smooth ride . . . they give long life. Those in service indicate an average ultimate life of 200,000 miles.

Simplex Snubbers will protect your equipment and lading.



*Simplex Snubber friction wedges are
"out in the open" . . . easily inspected.*

AMERICAN STEEL FOUNDRIES

SIMPLEX...The Long Lived SNUBBER

The Week at a Glance

HOUSE BILL A DUD: The House Committee on Interstate Commerce has now got, from its sub-committee, a bill to match S. 2009, which the Senate has passed. It is reviewed herein, and a pretty sad document it is. It exempts most contract water carriers from regulation, and it makes no provision for an independent investigating board to inquire into transportation subsidies. Of course, if the House passes this bill and it goes to conference—there is a chance that something of value might be restored in conference. But the essence of the present crisis in transportation lies in the recent unprecedented growth of socialized transportation facilities—and any act of Congress which does not make at least some small step toward correcting that situation is just plain useless.

ARE UNIONS POWERFUL?: Congress dawdles with its transportation legislation and promises little which will be of help, even if it enacts anything. Is this (the leading editorial herein asks) to be the net fruit of the much-touted "cooperation" of the railway labor organizations? Are these organizations as powerful as many have been led to believe, or, if they are, then are they actually utilizing this power to the full in behalf of legislation to protect railway traffic and employment?

IS F. D. R. DEPENDABLE?: The wage reduction the railways sought last year would have meant 250 million dollars to them. When the railways abandoned the move for this reduction, it was with the promise of President Roosevelt that he would support the legislative program agreed upon by his Committee-of-Six. Now, eight months after the abandonment of the wage reduction movement, as the leading article herein indicates, there is no prospect of any legislation of anywhere near the monetary value to the railroads of the wage reduction. And President Roosevelt has kept his promise by sitting silently by while two members of his cabinet have appeared before Congress in the effort to sabotage the legislation that the President promised to support.

"AGREED CHARGE" No. 3: The Canadian railways have another "agreed charge" (details elsewhere in this issue). This agreement binds the oil companies to do all their shipping in Ontario by rail—except that they may operate tanks of not more than 1200 gal. for any distance, and larger tanks for distances 25 miles or less.

ELECTION YEAR SPENDING: A pretty comprehensive scheme for putting the government into the business of owning and leasing all kinds of railroad equipment is included in the New Deal's spending-lending program now before Congress. Senator Wheeler is out after this idea and will put the Indian sign on it if he can. Meantime, the gaudy plan to self-liquidate $\frac{3}{4}$ billion on toll highways is getting a

rapping in other quarters—though, probably, much of the yammering against this part of the project is aimed more at the tolls than it is at the waste of the people's money. Compensatory tolls on highways would provide a real test of whether the people really want their money spent on these costly facilities or not—and, by golly, if there is anything some interests can do to prevent such a test being made, they'll do it.

SCARING CUSTOMERS AWAY: If the I. C. C. muddles into the present chaotic rate situation, such action will freeze the face of the monstrosity for a couple of years, during which time it will continue to scare away more and more traffic. Such is the warning note sounded in the current installment of our series on "What Will the Traffic Bear?" The author counsels the railroads to move rapidly to correct the more obvious errors of the *status quo*, lest they, having already lost their shirts because of this gargoyle, also be bereft of even more essential portions of their raiment.

REVISE FREIGHT CLASSES?: The A. A. R. now has a full-time committee of three working on a revision of the classification of freight, with the goal of a revised and simplified classification applicable all over the U. S. The committee will be in Chicago this month, in New York next month, and will thereafter alternate monthly between the two cities until it finishes its job. Rumor hath it that there is also some move afoot to modernize the rate structure.

LONG SLABS: For six years now the C. N. R. has been extending its use of precast and poured-in-place concrete slabs for grade crossing elimination jobs—and now has continuous slabs up to 90 ft. long under main line tracks (as is related in an illustrated article herein).

NOW YOU TELL ONE: All three members of the National Mediation Board were in Chicago last week holding what was allegedly "a routine meeting" with the Adjustment Board. The coincidence of this hegira of the Washington board to Chicago with the objections the labor members of the Chicago board have been raising to letting newspaper reporters in on the Adjustment Board hand-out procedure was said to be "purely accidental."

CANS CLASS RATES: The B. & M. and Maine Central have asked permission of Their Worships the I. C. C. to put in experimentally some l.c.l. rates in Northern New England which would throw out the first four classes and substitute a flat rate at slightly less than fourth class. We hope that the I. C. C. may graciously grant this permission—and, even more, we hope the rates will do the job—because they fit the tune we have been singing for some months in our "What Will the Traffic Bear?" series.

BEST TRAFFIC GUESSER: So far, the Trans-Missouri-Kansas Advisory Board has turned out the most accurate estimates of probable quarterly carloadings. The 13 boards in the 8 years 1931-38 inclusive averaged 13.6 per cent off in their estimates of quarterly loadings, but the Missouri-Kansas board was only 8.4 per cent wrong, on the average, in its estimates, while the Mid-West Board was a close runner-up with a percentage of error of 9.4. A short article herein records the performance accuracy of the individual boards, and of all of them taken together.

TO PROBE FORWARDERS: The Senate has okayed the Wheeler-Reed proposal authorizing its interstate commerce committee to investigate the freight forwarders and railroad methods of handling such business, as well as l.c.l. and express.

JOBS MOVE UP: 34,320 more men were working on the railroads at the middle of June (total 991,900) than at the middle of May, an increase of almost 3.6 per cent. Compared with June a year ago, the increase was almost 8.4 per cent.

W. P. A. PENSION FLOP: The widely publicized W. P. A. help to the railroads in bringing their pension records up-to-date was allowed quietly to fold up over three months ago, it is disclosed in a report in the news pages herein. Not enough furloughed railroaders could be found who wanted the jobs and who were qualified.

TRANSPORT SOCIALISM: Toll-free improved waterways are of the essence of socialism—"production for use and not for profit." The railways as taxpaying private enterprise cannot compete with them any more than the private utilities could compete with T. V. A. Such socialism must either be eliminated from transportation, or the railways too must inevitably be socialized.

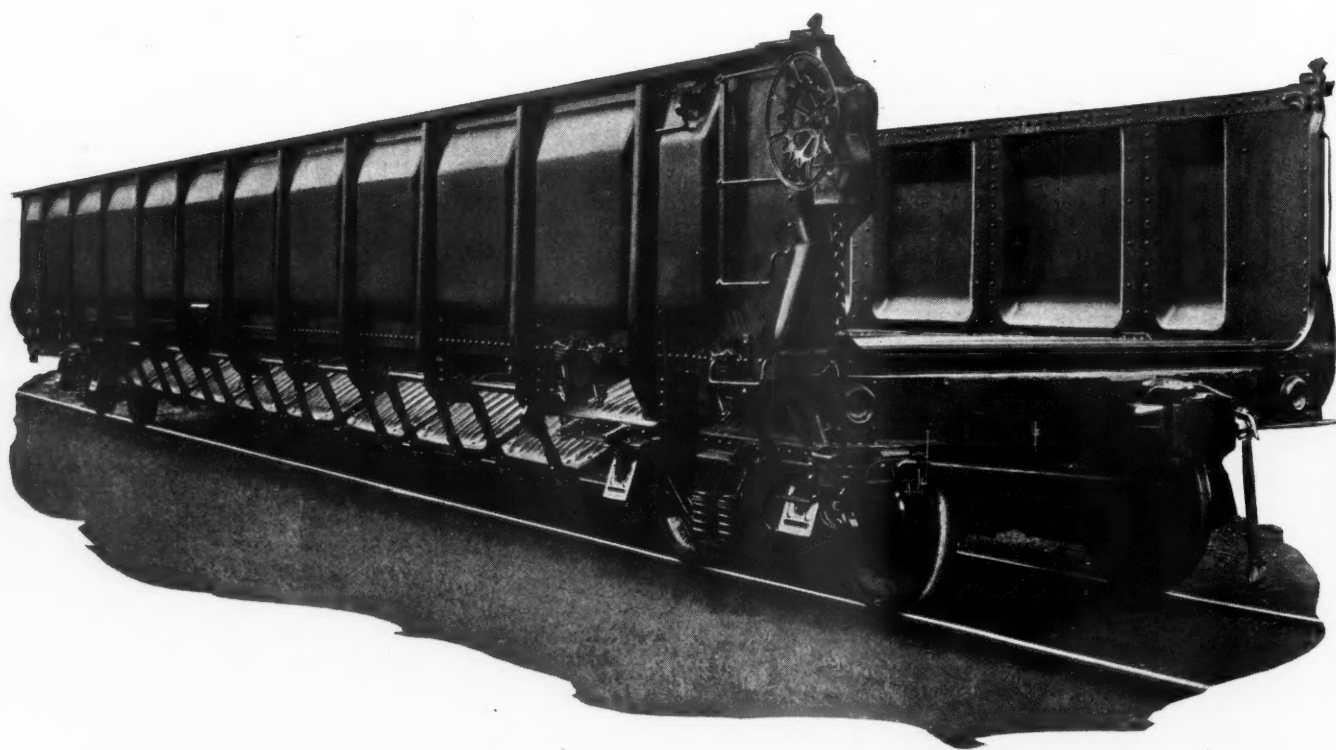
GHOSTS OF "ROBBER BARONS": One of the most amusing aspects of the transportation bill the House sub-committee has cooked up is that it exempts from any regulation precisely those water carriers about which there is the most reasonable ground for complaint—namely the bulk cargo boys. These fellows are Big Business, practically all of them, because the little fellows can't get together enough freight to fill a barge every day—in fact most of them can't do business in barge loads at all. So the improved rivers are mainly a racket for the benefit of Big Business at the expense of the taxpayers—and, as Senate testimony showed, these birds do not pass on to their customers their "savings" from using barges. So what does the House bill do? It says, go ahead and regulate the water carriers if you must—but just exempt the 90 per cent or so of them that happen to be the minions of Big Business. A reminder of the old "Robber Baron" days plumped down in the middle of the New Deal.

**Records show that on cars with
stakes protected from the load
the stakes last the life of the car**

**OBTAIN THIS PROTECTION
AND INCREASED CAPACITY WITH
PANELED SIDES**



SIDE STAKE CONSTRUCTION



**STANDARD RAILWAY EQUIPMENT MFG. COMPANY
CHICAGO**

The Week at a Glance

WILLKIE THE WIZARD: Wendell Willkie, the utility executive, has succeeded in talking the government into buying out, at a fair price, one of his properties with which the T. V. A. was competing. His strongest argument for this square deal for his company was that such government action would prove to utility investors that Uncle Sam was not going to high-jack them—and hence would restore investors' confidence in utility securities and promote capital goods expenditure, fostering recovery. Well—if that argument is sound for utilities (and it is)—why not for railroads? After all, the government competes far more unfairly with the railroads than it does with utilities because, as a power producer, it charges *something* for its product, but it provides waterway transportation facilities absolutely free of any cost whatsoever to the users. The utilities, with a far less serious grievance than the railroads, have had a lot better luck in arousing the public to make amends.

FORWARDERS SENT TO RENO: The New York Central has put its stock control of the Universal Carloading & Distributing Corp. under trusteeship of Former Commissioner Meyer, and the C. & O. and the Pere Marquette have handed over their holdings in the National Carloading Corp. to Former Commissioner McManamy, as trustee. By this action the railroads believe they have complied with the commission's order in the forwarder case, ordering them out of this kind of business. Commissioner Porter accepted these trustee agreements for the file—but Cautious Claude made it clear that this acceptance did not constitute an admission that the I. C. C. is satisfied.

TO CEASE COMPETING IN PA.?: The railroads and the common carrier truckers have come to an agreement in Pennsylvania under the aegis of the Public Service Commission where both of them agree to charge identical rates, praying the commission meanwhile not to permit contract carriers to charge lower rates.

MORE JACK FOR COST FIGURES: The Bureau of Statistics of the I. C. C. is out after \$40,000 more money in order to enable it to go more deeply into cost analysis for rate-making purposes. Appearing before the House subcommittee, three commissioners, Secretary Bartel and Arthur White of the statistics bureau, explained that the dough on hand will enable the bureau to work up only its routine statistical reports—if it is going to get anywhere with costing for rate-making purposes, Uncle Sam will have to raise the ante.

WATERWAY "ECONOMICS": The Wall Street Journal is lamentably ignorant of the "economics of this great mid-continent area," in the opinion of Lachlan Macleay, president of the Mississippi Valley Association, who has written that publica-

tion to upbraid it for picking flaws in the association's ditch dole program. "Economics" is the euphemism which Lachlan applies to the practice of shaking down the taxpayers for waterway improvements so barge lines can swipe traffic away from the railroads. Well, Lachlan, you could also call a skunk a rose but the revelatory stink would still stick to prevent the nice name from fooling anybody. The Mississippi Valley Association exists to nick the taxpayers to pay for transportation—and, even worse, to spend their money, not for efficient transportation, but for the most expensive. If that is "economics"—then, this paper is the official organ of the Mississippi Valley Association.

MACLEAY, MORALIST: Lachlan also goes on to protest how much he wants "to see the railroads do well and make money"—thereby disclosing that his ethical learning is of the same profundity as his economics. For it is an elementary ethical precept that no man can truly will a result while he refuses to will the means to achieve that result. What kind of a well-wisher is it who wants more and more federal appropriations to enable rivals of the railroads to filch more railroad traffic? Lachlan's fondness for the railroads is a lot like the love of the bibulous for temperance—they think it a fine thing if only it might be achieved without their having to leave the jug alone.

GIFT HORSE OR TROJAN HORSE?: To increase railway purchases without increasing railway purchasing power (i. e., their net earnings)—those words sum up the New Deal's election-year lending-spending objective as far as the railroads are concerned. The leading editorial article analyzes this program, pointing out that the leasing proposal is nothing but one aspect of government ownership—and, if that is what we are in for, why adopt it piecemeal? Liberal government loan funds—either for equipment or to buy in railroad bonds at depressed prices—are aspirin tablets for a fellow whose trouble is malnutrition. Give him enough to eat (i. e., reasonable net earnings) and you can keep your damned pills. But, if a reasonable quota of food is to be denied, some pain-killer in the form of federal loans may keep the wretch alive and a little more comfortable for a while anyhow.

PLYWOOD REEFERS: Attractive appearance, low ice consumption and easy sanitation are among the advantages claimed for 10 refrigerator cars, built on a steel frame, but with Douglas fir plywood replacing the usual matched lumber. These cars are described and illustrated in an article in this issue—which points out also that the material used reduced the weight of the car 1½ tons and cut down the customary pieces and joints involved in fabricating the job by 89 per cent, thus reducing the labor cost of construction.

HOUSE BILL REPORTED: The House interstate commerce committee has at last got around to reporting out its transportation bill, with some minor changes. One of these is a joker which calls on the I. C. C. to expedite its report on sizes and weights of motor vehicles, indicating presumably that the motor truck manufacturers' lobby is provoked at its slow progress in forcing giant trucks onto the states that don't want them. Just to show how much the railroads can depend on alleged "conservative" leaders to give them a square deal, it is worth noting that a strong minority report was filed on the House bill by Wadsworth from N. Y.—a hard-shell G. O. P. aristocrat.

CONSTRUCTION COSTS: 1938 costs of railroad construction were off 4 points from 1937 on the index kept by the Valuation Bureau of the I. C. C. With 1910-14 costs as 100, the 1938 index stood at 149 (153 in 1937), but was still materially above the post-war low point of 133 touched in 1933. The post-war peak was 226 in 1920. The only job which costs less today than in 1914 is grading (1938 index at 93), while the indexes on the cost of shop and power plant machinery, locomotives, passenger cars, motor equipment and work equipment all had 1938 indexes of 190 or more.

DO RRs WANT "EASY MONEY"?: President Pelley of the A. A. R. thinks government equipment loans would stimulate buying if terms were liberal enough. So he told the Senate committee on banking which is considering the Administration's spending-lending bill, designed to promote election-year prosperity. But neither Mr. Pelley nor Commissioner Eastman want the R. F. C. to get into the equipment owning and leasing business, and Senator Barkley says he will amend the bill to preclude it.

JESSE KICKED UPSTAIRS?: Commissioner Eastman, enlarging further on his opposition to the R. F. C. as an equipment owning and leasing agency on a permanent basis, said he would be willing, however, to trust such a function to a gent like Jesse Jones. Thereupon the question was raised as to whether Jesse in his new job would have the say-so on railroad loans any more and the Venerable Carter Glass spoke up to say that Mr. Jones "has had a white feather stuck in his hat, and has been lifted to an honorary place."

GOODBYE B'WAY, HELLO S. F.: With the retirement of Hale Holden as chairman and the naming of four new directors on the Coast (who, with President McDonald and another Coast director form the new executive committee), the Southern Pacific bids good-bye to Broadway. That is, New York is no longer its headquarters' office—but the financial vice-president, controller and treasurer will remain there.

SIMPLEX CLASP BRAKES

"Do not fail to see 'Railroads on Parade' at the New York World's Fair."



...on the tender trucks of 50 new locomotives

Ten of the locomotives are streamlined, as illustrated; the remainder are of the conventional type.

All of the 50 new locomotives built by the American Locomotive Co. for the New York Central have Simplex tender truck Clasp Brakes.



With high speeds and quick stops becoming increasingly important, Simplex Clasp Brakes are a necessity in the operation of modern power and passenger equipment, as well as in the operation of steam and Diesel switchers.

AMERICAN STEEL FOUNDRIES

The Week at a Glance

EQUIPMENT LOANS: Liberal loans to railroads for equipment and shop machinery are still in the New Deal's spend-lend program (which is being kicked around in Congress at this writing), but the Senate currency committee has reduced the amount to be lent from 500 millions to 350 millions. The politicians will go to any length to try to revive railroad purchasing—except, of course, the obvious method of restoring railroad earnings, and hence, their purchasing power.

HEIL HENRIK! Few things that Senator Shipstead has done in his public career have excited the admiration of the scribe who indites this page—but Henrik made good in a big way this week. He introduced a bill which would fine the minions of Big Business \$1,000 every time they ship their goods by waterway and then soak their customers the f.o.b. price plus the rail freight rate, pocketing the "savings" as extra profits. If such a bill were enacted, a lot of the Babbitts' enthusiasm for the "economies" of inland water transportation would vanish overnight.

THE GORGEOUS "WILKES": The Lehigh Valley's resplendent reconditioned train (in a livery of red and black with white striping) is described in an illustrated article herein. This makes the second modernized train serving the "Walley"—and the company has not stinted itself in doing a thoroughly artistic job, both inside and out. Fluorescent lighting is used in all railroad-owned cars, the L. V. having adopted this as standard.

S. A. L. TO TRUCK L. C. L.: The I. C. C. has granted permission to the S. A. L. to proceed with its comprehensive plans for using trucks for l.c.l. way-freight handling throughout a large part of its system. The commission granted this authority with a proviso that the new service must be restricted to territory already served by the Seaboard.

A GENESSEE NOBLEMAN: A word of cheer to those uplifters who so often bewail the fact that well-bred gentlemen in America do not take to politics, as they do in a refined country such as England: Just take a look at Jimmy Wadsworth and cease your pining. They don't come any more aristocratic on this continent than the blue-blooded James—from the Genessee Valley in Western New York. Among a more enlightened people, he would be at least an earl, maybe even a duke. Bearing in mind this picture of a self-sacrificing nobleman (who might be out riding to hounds or bringing poachers to well-merited chastisement, but who, instead, is sacrificing himself to serve his people in the halls of Congress), turn to the pages herein wherein we recount the debate on the Lea transportation bill. Surely here we will see a heartening spectacle of *noblesse oblige* and a championship of justice and fair dealing. Actually, we see

no such thing. What we see is a contender for special privileges for the users of inland waterways—and to hell with an even chance to make a living for the railroads and their employees. If Wadsworth is a fair sample of the landed proprietor in politics, then America is lucky that her people usually prefer common clay like themselves to defend their interests in legislative forums.

WHO ARE OUR FRIENDS?: There is no party line which divides the Congressmen who are willing to give the railroads an even break in meeting competition, from those who would hamstring the railroads while giving boundless federal favors to their rivals. "Free enterprise" anti-New Dealers are just as numerous in the camp of the transportation socialists as are erstwhile radicals among the defenders of a square deal for the railroads. Read the debate on the Lea bill, as reported in an article in this issue—and either weep for your country or get what cynical amusement you can therefrom, depending upon the way you react to tendencies which determine your country's future history.

HOUSE FINALLY ACTS: Well, anyhow, despite all that Jimmy Wadsworth and the rest of the friends of socialized transportation could do, the House finally voted to pass its version of S.2009. (There was no record vote on actual passage, but a vote to recommit the bill to committee received only 100 votes—which presumably just about sizes up the strength of the waterway "bloc.") But there are some bad amendments in the bill as passed (one, put there at the behest of those staunch team-workers, the B. of R. T., would forbid any consolidation which impaired any existing employment rights—i. e., it would preclude any consolidation at all, just as the 1933 bill did). The bill now goes to conference—with the prevailing opinion being that Congress will adjourn before the conferees report, and, hence that final enactment of the measure will be delayed until Congress convenes in January.

RIVER BILL HELD UP: The "economy bloc" in the Senate has prevailed upon the Commerce Committee not to press for passage at this session its pork barrel measure for rivers and harbors, totaling 408 million dollars. This enormous addition to socialized transportation, however, is merely held over till next year—it has not been kayoed.

CHANDLER BILL PROGRESS: The Chandler bill, to permit financially distressed railroads to reorganize by voluntary agreement of creditors, without going through the courts, has moved near to enactment—the Senate having adopted the conference report on it. In its final form, however, the bill carries many restrictions which will limit the number of carriers which can take advantage of its provisions.

HOUSEHOLD MOVING: The Interstate Commerce Commission has laid down some elaborate rules (reported in the news pages herein) for truckers moving household effects—one notable requirement being that rates are to be based on weight rather than cubical measurement.

U. P. COOLS OFFICE AIR: The largest automatic air-conditioning plant ever constructed has recently been placed in operation to improve the working conditions in the U. P.'s headquarters office at Omaha—full details in an illustrated article herein. The plant operated as a cooling facility only last summer, but the results were so satisfactory that it has been improved to serve also to control air conditions during other seasons.

PATTERSON ON I. C. C.: In the naming of Safety Director W. J. Patterson to the I. C. C. bench, President Roosevelt has selected a worthy successor to carry on in the tradition of Commissioner McManamy. In its numerous membership, certainly it is well that the I. C. C. should have at least one man with the peculiar qualifications which Messrs. McManamy and Patterson have brought to their work.

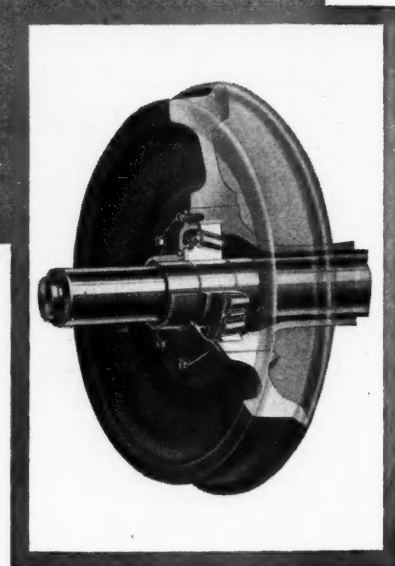
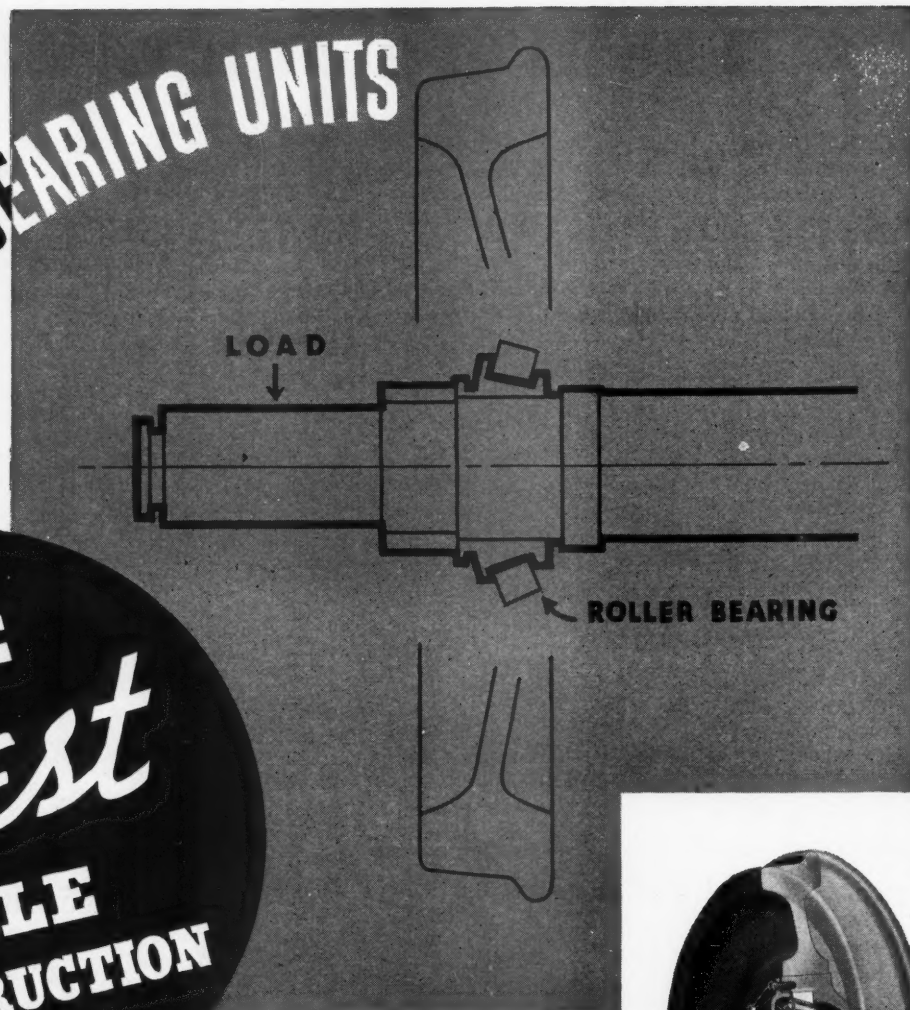
SUMMER FROLIC: Why spend good money on the theater when you want a little harmless fun, looking at fellow-humans behaving like various varieties of asses? Right in and bordering on the transportation business we have clowns enough to make the Olympian gods roar. So patronize home industry; save your cash; just turn over one page and the great show will begin—"The Transportation Follies of 1939," with an all-star cast (some of the biggest stuffed shirts in all history). First we have—

THE ANTI-NEW DEAL ARMY: Some of our most side-splitting characters are in this act. They are dressed up like a bunch of Central American generals, with banners denouncing "socialism" and "extravagance" and they aim to look dignified and awe-inspiring. But in walks Papa Roosevelt with a plateful of waterway and highway pork, and these terrific generals forget all about their war on the New Deal and "socialism" in their scramble for the pork, not forgetting the gravy. A most delightful spectacle, folks. Don't miss it. Larry, turn the crank.

A DIXIE DIEHARD: The next act in our revue is a monologue by a famous Senator from the South. He is dressed up like a Crusader—yes sir, and he looks the part too; he even fooled us for a long time. But what does he turn out to be? A Red—in fact if not in name. The denouement is one of the most exciting events ever presented on stage or screen. You mustn't miss it. Larry, turn the crank. (And here we take reluctant leave of the pleasant business of barking this great show, to turn our attention to more pressing, if less amusing, matters.)

"Railroads on Parade" is a feature of the New York World's Fair you should not miss.

A-S-F ROLLER BEARING UNITS



Roller Bearings used in A.S.F. Units are manufactured by
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The vertical load is applied to the inner axle member of an A. S. F. Roller Bearing Unit in exactly the same way as to the friction bearing axle.

The roller bearing race and shrink collar are attached to this axle at the same location as the wheel to the friction bearing axle. No new principles of axle design are involved.

The axle carries only the vertical load. Also, it does not revolve, hence is not subject to stress reversal with each revolution of the wheel.

Service has proved its safety.



AMERICAN STEEL FOUNDRIES

The Week at a Glance

COACH TRAINS MAKE BOW: The Pennsylvania's and the New York Central's deluxe coach trains between New York and Chicago made their maiden runs last Friday, attended by a large barrage of newspaper and other publicity. (This latter was undoubtedly aided considerably by the roads' generosity in taking a considerable number of metropolitan reporters along for the entire run of the new trains).

THE LUCKY UTILITIES: So that T. V. A. will not compete unfairly with private utilities, Senator Norris has introduced a bill calling upon it to pay a certain percentage of its gross revenues to the state and local governments in lieu of the taxes which T. V. A. would pay if it were in private ownership. What a job the utilities have done in selling their government competition story to the public! And all the time the government transportation plant, in competition with private transportation, doesn't even charge its customers enough to cover expenses—let alone any taxes.

THANKS, GENTS: Most of the members of both the Senate and House committees on interstate commerce deserve the sincere gratitude of all railroad people for the great battle they put up in behalf of improved transportation legislation. So the leading editorial in this issue holds forth—especially in view of the frenzied opposition to any concessions which the privileged agencies of transportation put up. At one time it looked as if the waterway herd was going to wind slowly o'er the Lea—but they couldn't make it.

SURFACE SCRATCHED: Neither the House nor the Senate transportation bills really come to grips with the fundamental problem of the industry, though. This problem lies in the constant growth of *socialized transportation* plant—made available to private carriers free of charge. Nobody can make a living *selling* something which Uncle Sam is *giving away* in larger and larger quantities. This is the real railroad problem. It is as simple as $2 + 2 = 4$ —yet Congress has not even recognized it, let alone done anything about it.

THERE ARE SPEED LIMITS: The high-speed trains of recent years have proved, where fast running is restricted to track and equipment conditions which can take it, that fast running involves no hazards. But experience has also shown (as an editorial herein points out) that not all track conditions *can* take such speeds—such, for instance as putting a train around a better-than-6-deg. curve at more than 70 m. p. h. When speed restrictions have been raised to the maximum of safety, it is absolutely necessary that they be enforced with the utmost rigor.

N. Y. S. & W. BUSES: The Susquehanna on August 1 inaugurated a short-cut bus service (details herein) between its line on the Jersey meadows and uptown

New York. The road's regular terminal facilities are more convenient for downtown, rather than uptown, New York—and, by having buses intercept its trains before they reach their Jersey City terminal, the road will save almost half an hour of traveling time for some of its commuters.

THE CONFEREES: The fate of proposed transportation legislation, to be acted upon finally by Congress when it reconvenes in January, now rests largely in the hands of the joint conference committee. The gentlemen entrusted with this important task are the following: From the Senate, Messrs. Wheeler of Montana, Truman of Missouri, Donahey of Connecticut, White of Maine and Reed of Kansas; from the House, Messrs. Lea of California, Crosser of Ohio, Bulwinkle of North Carolina, Cole of Maryland, Wolvertson of New Jersey, Holmes of Massachusetts and Hallick of Indiana.

NET UP, STILL LOW: For the first six months of the current year the railroads' net railway operating income trickled in at the annual rate of 1.57 per cent on their investment—which would mean only a little over 400 millions for the year. But, with loadings up the way they have been recently, the prospects are rather better than that (June's earnings, for example, were at the rate of 1.83 per cent which, for a whole year, would produce about 470 millions of net earnings).

TRUCK LOADINGS SOAR: Trucks handled 26 per cent more traffic in June this year than they did last—according to the index of the Trucking Associations. (The four June weeks in which railroad carloadings were reported showed a total only about 14 per cent above last year.)

RAIL KNOWLEDGE: All (that is, practically speaking) rail fissures develop from internal shatter cracks, but only a small percentage of shatter cracks graduate into fissures. Fissures are not spread by bending stresses, but by a "complex localized stress directly under a wheel." In testing rails for acceptance, bend testing will give more consistent results in detecting shatter-cracking than will the standard drop test. These significant observations (and many more beside) are gleaned from the fifth progress report of the research into rail fissures, summarized herein. Patient, exhaustive and objective experiment is gradually piling up a store of important new knowledge on this vital aspect of railroad work.

TRUCK SAFETY RULES: Private truckers need regulation as far as safety is concerned, just as much as contract and common carriers—so Examiner Snow has reported to the I. C. C. And he asks the Commission to regulate them all in this respect (excepting farm trucks—presumably in the belief, either that farm trucks don't have accidents, or that it doesn't make much difference if they do).

28300 & 28310: Jot those numbers down, friends—you'll want to remember them. The first is the Commission's general investigation into class rates and the second is that into the classification of freight. Secretary Bartel, in issuing the orders, urged that efforts now being made by the railroads along these lines be continued. Some of Their Worshipships have apparently been reading a certain series of articles in *Railway Age*.

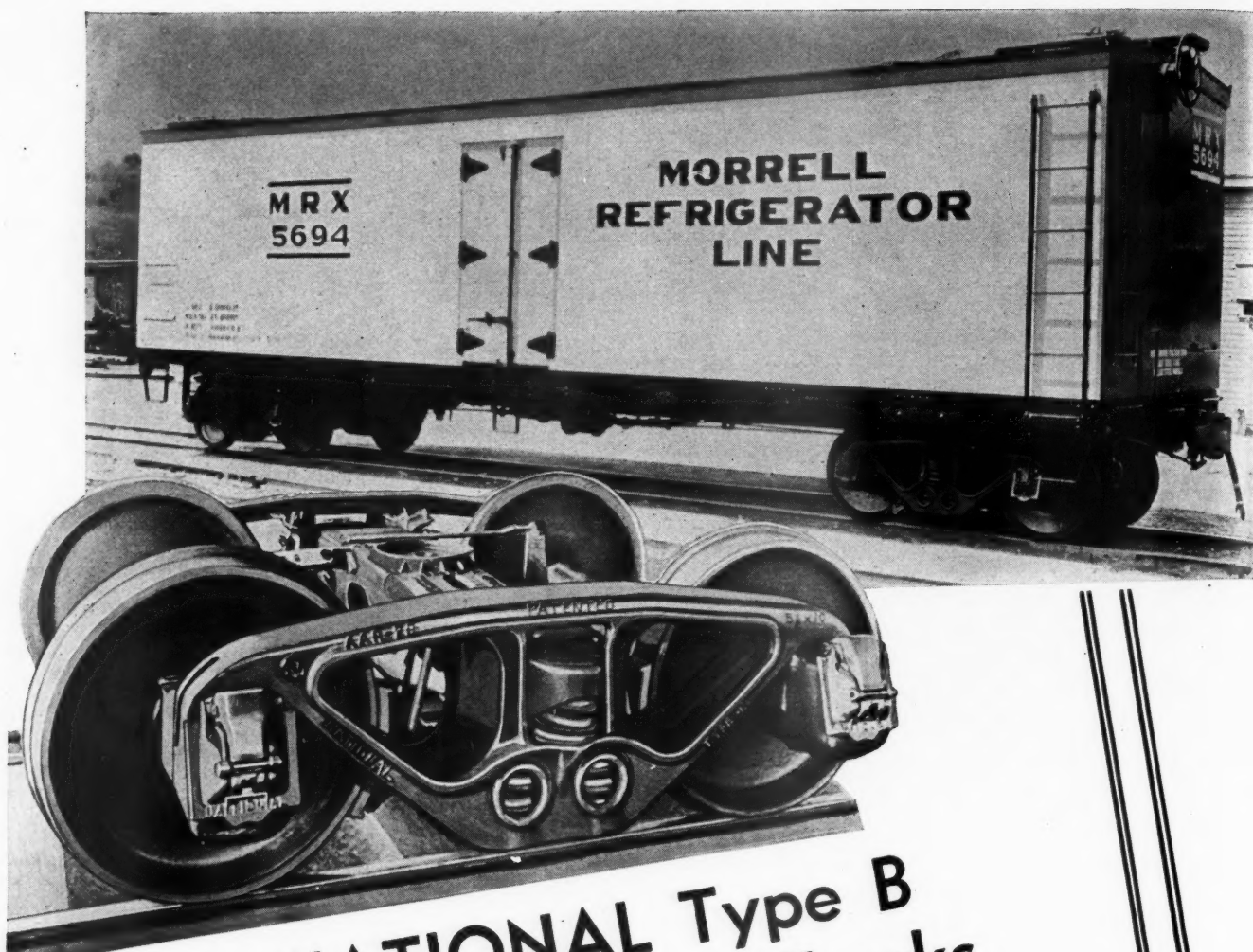
I. C. MAY BUY BONDS: The Illinois Central has asked I. C. C. consent to a plan whereby, instead of making the stipulated annual payment on principal on its R. F. C. loan, it use the money to buy its own bonds in the open market—turning over the bonds thus acquired to the R. F. C. as additional collateral.

MOTORIZED PROFESSORS: The National Highway Users Conference has issued another "study" by a professor which "permits an accurate conclusion" that "motor transportation is not subsidized." The conference seems to have a lot of money in its professor-hiring budget this year. The question still arises, however, how much a professor's testimony is worth when he merely dittoes opinions which his employers were peddling around long before they ever hired him.

COSTING OKAYED: Despite Congress' sudden wave of economy (they trimmed the deficiency bill 75 per cent) the House has voted the \$40,000 the I. C. C. asked for in order to add 11 employees to its cost accounting staff. So the railroads might well begin to brace themselves for what is coming. In supporting the appropriation Chairman Eastman of the Commission stressed the urge Their Worshipships feel to fix "minimum rates which will prevent destructive competition" between the various agencies of transportation.

CHI. BOARD PARLEY: To compose the differences between the railroads and the unions over the behavior of Adjustment Board referees, a joint committee has been named composed of Messrs. Harrison, Robertson, Jewell, Luhrsens, Johnston (B. of L. E.), Phillips (O. R. C.), Gardner (O. R. T.) and Hogan (Marine Engineers)—for the unions—and Etter (A. T. & S. F.), Gillick (Milwaukee), Parsons (L. & N.), Pollard (C. of G.), Walber (N. Y. C.) and Enochs (P. R. R.) for the railroads.

LET I. C. C. DO IT? Our authority on "What Will the Traffic Bear?" predicts in his article this week that the Commission's rate and classification inquiry will be urged by the friends of the status quo as a reason for the railroads to desist from their own efforts for reform. If the railroads listen to such counsel, he warns, it will be just too bad for them because the carriers just can't afford to lose the traffic that the present set-up will lose during the years which this I. C. C. probe will consume.



NATIONAL Type B Spring-plankless Trucks

are becoming more and more popular for cars in specialized service, where extreme conditions and nature of lading demand fast, dependable transportation.

Several outstanding features in design of the National Type B Truck make it the ideal truck for this class of service.

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The Week at a Glance

A VITAL JOB NOT DONE: A Senator, friendly toward the railroads, reports that: "I have found railway labor fairly influential, particularly on the Senate side. I have never seen a great industry so lacking in influence in either House of Congress as is railroad management." Our leading editorial seeks the causes of this low esteem and finds them in the failure of chief executives of the railroads either to give adequate attention themselves to common problems of the railroad industry, or to delegate sufficient authority to other people to deal with these problems. Five years ago the A. A. R. came into being to meet this need and yet, with 11 per cent more gross earnings, the railroads are today earning 27 per cent less net than they did when the A. A. R. first came on the job.

LABOR "CENSORING" PRESS?:

The railway labor organizations have written to the editor of the Saturday Evening Post to lodge a protest against an article reported to be in preparation for that publication covering the referee decisions of the Railroad Adjustment Board—and bringing into the light of day some of the peculiar working rules and mileage wage payments enjoyed by train and engine employees. The editor of the Saturday Evening Post has declined to be "censored" by the labor leaders—an imputation which they indignantly deny. So "Labor" denounces the S. E. P. and publishes a cartoon depicting it as interested only in propaganda. Just imagine anybody suspecting that the labor leaders would ever try to put pressure on an editor to sway his editorial policies! Perish the thought.

HOW TO KEEP OUT OF THE PAPERS:

And just for good measure in the labor leaders' disapproval of the press, the B. of R. T. (which hardly ever agrees with the other unions on anything) devotes considerable space in the current issue of its magazine to lambasting the newspapers for their reporting of the recent B. of R. T. convention. These harsh remarks against the press remind us of a society rounder who objected to the importunate questions of a tabloid reporter with the contention that his private life was his own business. "That would be true if you would behave yourself," the tabloid scout replied, "but when you pull things the rest of the people would like to and can't, they want to know all about you—and telling them what they want to know is how we make a living."

HIGHWAY FINANCE: Serious students of highway finance will get a welcome respite from the propaganda being issued in this field by the professors in the pay of the National Highway Users Conference in an article in the August issue of the Quarterly Journal of Economics entitled "The Literature of Highway Finance." The author is R. C. Brethut of Western Reserve University and he approaches the problem from the fresh

viewpoint of a student whose main interest is in public finance, rather than in boosting or booting some form of transportation. Only to such disinterested analysis can this perplexing problem ever look for a solution—certainly not to the alleged experts who have some axe to grind apart from the discovery of facts and the application of recognized scientific principles to them.

THE LUCKY UTILITIES: The House Majority Leader, Sam Rayburn, made a radio speech this week in which he said how glad he was that Congress had agreed to T. V. A.'s buying out at a fair price the private utilities with which, otherwise, it would have engaged in destructive competition. A few days ago we read of great jubilation over a load of grain barged over the T. V. A. waterways from St. Joe, Missouri, at a great "saving" under railroad "costs." How about it, Sam—is Congress willing to buy out the Tennessee railroads at a fair price, or is destructive competition by the government a sin only when the utilities are the goats?

CONGRESS WIND-UP: After all the furor about railroad legislation in the late lamented sitting of the Congress, the net showing in actual bills passed are the Chandler bill to enable a couple of roads to reorganize without bankruptcy and the so-called bridge bill, to relieve the railroads of a part of the cost of reconstructing bridges to improve the conditions of their waterway rivals. Of course, there is the general transportation bill, S. 2009, which Congress brought as far as the conference stage—but no one can tell whether this bill will be any good or not until the conferees report on it.

L. C. L. PROBE: Another legislative effort (not a bill but a Senate resolution) which may have interesting results is the Senate interstate commerce committee's quiz into forwarder practices and railroad methods of handling l. c. l. and express. Inquisitors are to be Senators Wheeler, Hill of Alabama and Reed of Kansas; and they expect to get going by the latter part of November. Judging from some of the remarks in the Senate debate on S. 2009, a few of the members in the upper house are not altogether friendly to the present conditions which surround the handling of l. c. l. traffic.

MORE JOBS: Employment on the railroads has crashed the million mark again—1,002,135 being the exact figure at the middle of July. This represents an increase of almost 8 per cent over a year ago.

BARGAIN FINANCING: Funds for buying new cars and locomotives are shonuff cheap these days, as a gander at the several equipment trust items in the news pages herein will disclose. The Southern, just for instance, is getting money at less than 2 per cent.

MORE N. Y. S. & W. PLANS: The Susquehanna is making another move to recover commuter traffic into New York (bus service to quicken journeys to the heart of the city at Times Square was reported in last week's issue). The new move is a proposal to put in frequent air-conditioned rail-car service between Paterson, N. J., and Susquehanna Transfer, where the change is made to buses for the remainder of the journey to New York, and to re-open to passenger service a line into the business section of Paterson which has been used only for freight service for the past 16 years.

THE FORWARDERS' FRIEND: The I. C. C. has said that truckers will have to cut-out giving lower rates to forwarders than they do their other customers. Chairman Eastman concurred in the decision but not in its wording. He thinks the forwarder is "by no means a parasite"—but is analogous to an express company. And, since the Express Agency pays less for railroad service than other shippers, he argues that there is no reason (except the lack of legislation) why the forwarder shouldn't also get a preferential rate. Well, Joe, we think your logic slipped a little there—because the Express Agency is railroad-owned. It is not a shipper, but a branch of railroad service like, say, the operating department.

MORE OF SAME: One fight for the forwarders not being enough for one week, Mr. Eastman went to bat for them again in another dissenting opinion. The I. C. C. having kicked out the forwarder-favoring rates mentioned in the preceding paragraph, the motor lines immediately came back with quantity rates which would extend to the forwarders preferential favors similar to those previously forbidden. The Commission quickly canned these rates—but not without a lengthy dissent from its Chairman. Commissioner Mahaffie joined him in his pro-forwarder views in both cases.

O-W TAKES A POWDER: The New York, Ontario & Western is withdrawing from full membership in the A. A. R., effective September 1, as an economy measure—thus assuming the status maintained by several other smaller Class I roads since the A. A. R.'s inception. Limited membership is retained in some of the association's divisions, however.

TRUCK CLASS RATES: The truck lines' classification of freight and their rate structure generally are going to get a good going-over by the Commission at the same time railroad rates and classifications are put on the operating table. Our authority on "What Will the Traffic Bear?" was just whittling himself up a barrel stave to be used on the I. C. C. for its singling out the railroads alone for its comprehensive inquiry when the boys corrected their own behavior.

IMPROVED SOLID STEEL ROOF

**PROVIDES DUST AND WATERPROOF
PROTECTION FOR THE LADING
AND KEEPS THE CAR FRAME SQUARE**



**STANDARD RAILWAY EQUIPMENT MFG. COMPANY
CHICAGO**

The Week at a Glance

ANOTHER F. D. R. PROMISE: President Roosevelt promised to support the program of his Committee-of-Six. But when legislation based on the Committee's report was pending in Congress, he permitted members of his cabinet to appear in opposition to it. Because of their objections, and those of other special pleaders, Congress found time to enact only the merest trickle from the Committee-of-Six program—a pitiful little bill taking off of the railroads the necessity to pay for bridge improvements for the exclusive benefit of their waterway competitors. And now President Roosevelt has vetoed even this tiny bill—the sole tangible measure which he could have cited as proof that he meant what he said when he put his Committee-of-Six to work last fall.

RRs' BAD BARGAIN: The railroads are in their present serious fix (compared to 1934) largely because of concessions they have made to railway labor—concessions they granted, partly out of fear of what the New Deal administration would do to them if they didn't concede, and partly because of the promises held out by the administration as to what it would do for the railroads in return for concessions to organized labor. So far, the administration's promises have not brought the railroads a nickel—and the leading editorial herein raises the question: **What could the administration have done to the railroads, if the railroads had not truckled to it, which would be any worse than the 300 million dollars annually that unwarranted concessions to labor are costing?** That proverbial bad bargainer, the Biblical Esau, at least got a mess of pottage in return for what he gave away.

NO HOLDS BARRED: The Alabama truckers are carrying on a legislative war against that state's 10-ton gross weight limit on trucks and have hooked up this demand to one that the railroads be compelled to reduce their freight rates—the ancient propaganda device of relating a novel demand of dubious popularity with an old one which is generally accepted. (Just as if truck operators really gave a damn how high railroad rates are—it is low railroad rates which gripe them).

THE EVER-HELPFUL I. C. C.: It is to be hoped that the degree of co-operation which can be expected of the Interstate Commerce Commission with the desire of some railroads to do some patently much-needed experimenting with the class rate structure is not to be gaged by the action of Their Worshipships last week when they hung a 7-months suspension on B. & M. tariffs abolishing, experimentally, the first four 1. c. 1. classes.

WHY NO LEGISLATION?: Friendly "public relations" are a costly luxury unless they can be turned into concrete legislative acts of material benefit to the in-

dustry which spends money to cultivate the public. The leading editorial herein traces the poverty of tangible results for railroad public relations activities to the lack of coordination between such work and legislative activities, with the officers handling the latter apparently having the upper hand—despite their long record of meager accomplishment.

ECONOMY PENALIZED: The Interstate Commerce Commission has decided to make it as hard as possible for railroads to substitute truck service in lieu of railroad service. Heretofore such substitutions have been made—when no invasion of the business of a highway carrier was involved but simply a reduction in railway operating costs—merely by special permissions and tariff rules. Hereafter, to continue such services when these permits expire, the railroads will have to go through the formal procedure of applying for certificates of convenience and necessity for highway common carriers.

CRUTCHES FOR THE HEALTHY: The Saturday Evening Post in its current issue has an article on the growth of trucking which is completely impartial—and yet which, purely on the basis of facts which the writer does not try to interpret, indicates that the railroads' headaches with this competitor have only just begun. Nobody with any respect for his American heritage would want to put any obstacles in the way of the ingenious enterprise which many of these truckers show. But certainly such virile fellows have no need of a crutch from the government in the form of highway service at less than its full commercial value. And the proof of the fact that trucks do get highway service at less than its true value lies in the fact that none of them has yet undertaken to build private highways with private capital. Until they start doing this, it is obvious that their road-use fees are a bargain.

HOPPERS FOR CEMENT: Bearing in mind that the shippers' concern is his total transportation cost—not merely what he pays the railroad—the L. & N. E. has placed in service 175 hopper cars for cement loading which greatly reduce the handling costs of shippers and consignees and which, as a result, have led to a material increase in the road's cement tonnage. These cars, described in an illustrated article herein, will also effect savings for shippers and consignees of other bulk commodities—such as lime and chemicals.

S. P. PROTECTS AGAINST FLOODS: When the rains and floods visit Southern California again, as they did with such disaster to the S. P. in March last year, they will find the road well fortified against their onslaughts. An illustrated article elsewhere herein shows how the line has been prepared to meet such eventualities.

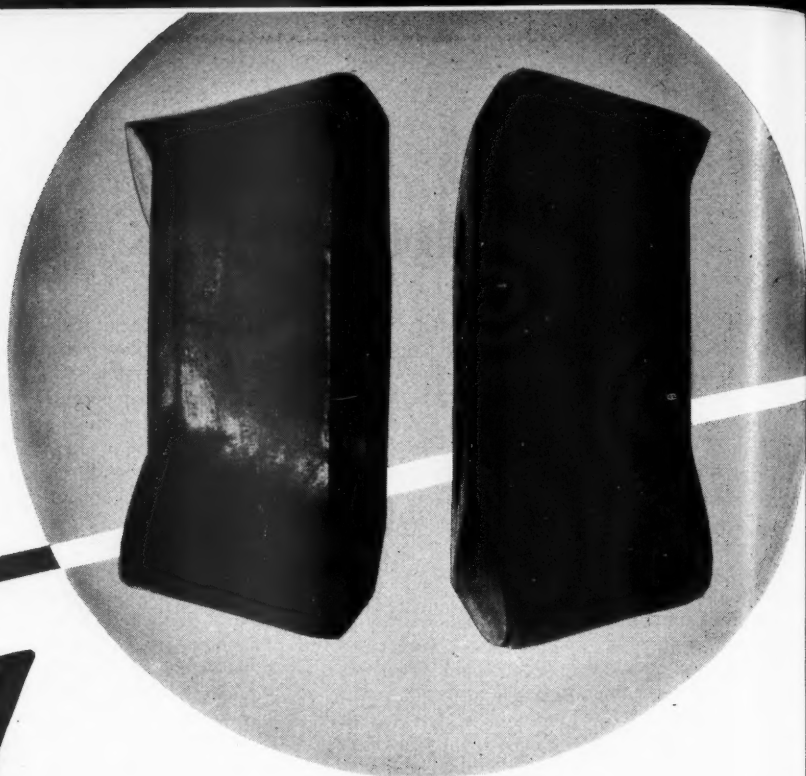
HYPOCRITICAL UTILITIES: In spite of the howls of the electric utilities at the unfair competition they are receiving from government power projects—and their appeals to the public to put a stop to this injustice, we note no such concern by the utilities for the principles of private enterprise when socialism works to their advantage. For example, it is reported that a large power company in Central New York plans to increase its patronage of the New York State Barge Canal for bringing in its fuel supply. Just let every business follow the lead of some of the utilities—and favor socialism every time there seems to be an immediate advantage in it, and soon the socialists will be a majority of the voting population.

DEATH IN NEVADA: The diabolical cunning of the wreckers who put the "City of San Francisco" into the Humboldt river seemed aimed primarily at a maximum casualty list—as the account on another page in this issue reveals. The removal of the rail so near the bridge assured the demolition of the latter, with the consequent certainty that cars would pile up on top of each other in the river, to the maximum injury of their occupants. Had the cars had a chance to scatter around, quite likely no deaths at all would have occurred. At this writing no defect in equipment, track or operating methods has come to light which in any way contributed to the horror of this catastrophe.

KNOWS HIS ONIONS: Some months ago it became evident that the new senator from Kansas, Clyde Reed, was going to make a valuable member of the Senate Interstate Commerce Committee, because of his unusual background of experience in transportation. And a hint of just how much he *does* know, particularly about the inland waterways racket, is given in a short article elsewhere herein.

MORE WILLKIE WIZARDRY: The past week witnessed the brilliant climax to as great a piece of industrial statesmanship as, in all probability, history records. We refer to the sale by the Commonwealth & Southern Corporation to the T. V. A. of its electric power properties with which T. V. A. was competing—a sale engineered by Commonwealth's President Wendell Willkie. True, the sale price was only four-fifths of the fair value of these properties—but what other industry with which the government is competing ever got a purchase price so high? (Would the government pay four-fifths of their fair value for the railroads?) And Mr. Willkie used the whole transaction as a means to bring home to the public the suicidal folly of the government's policy toward the utilities. See page 279 herein for more about this splendid performance. A few more Willkie's in positions of power in American industry, and the country might yet be saved from socialism.

"Railroads on Parade" is a feature of the New York World's Fair you should not miss.



WHICH
*has had 100,000
miles of service?*

The above illustration shows rubber springs that are used in Simplex Snubbers to create the pressure between the friction surfaces. One of these springs is new. The other has had over 100,000 miles of service under a brine tank refrigerator car.



Simplex Snubbers can be applied to Double Truss Trucks, Dalman One Level Trucks and certain conventional trucks.

This "100,000 mile" spring has lost none of its capacity or resilience. The rubber is not affected by weather, brine, sulphur drip or chemical fumes encountered around some industrial plants.

Over 18,000 Simplex Snubbers have made over 100,000 miles each under refrigerators . . . and they're good for another 100,000 miles.

AMERICAN STEEL FOUNDRIES

SIMPLEX...The Long Lived SNUBBER

The Week at a Glance

UNWORTHY STEWARDS?: The self-interest of an industrial traffic manager (if his efficiency is thoughtlessly gaged solely by his *showing* of reductions in transportation "costs") frequently may not coincide with that of his employer. Hence the traffic man may use some of his employers' money to foster such organizations as the Mississippi Valley Association, or other societies for promoting transportation socialism—when actually the responsible heads of his business are opposed to socialism. The leading editorial suggests that the A. A. R. and the R. B. A. call the attention of the chief executives of business to the use of their money and names in support of these socialistic societies—asking them whether they are fully aware of the inevitable consequences of the spread of socialism in transportation.

57-TON EXPRESS CARS: 25 express cars of high-tensile steel construction (capacity 33 tons, weight 57 tons) have been delivered to the Southern by the builder, and are described in an illustrated article herein.

BOX-BAGGAGE CARS: 40-ton cars to be used in handling l. c. l. freight on passenger trains are being added to C. N. R. equipment and are described in a short article in this issue. The cars look like box cars (except in color, which is "passenger car green"), but are fitted for operation in passenger trains.

ERIE HOLDERS GET LOOK-IN: It is news nowadays when the I. C. C. proposes a railroad reorganization which gives the stockholders a look-in on the proposed new capital structure. Such, however, is the recommendation of an examiner in the case of the Erie—present preferred and common shareholders would get about 17 per cent of the common of the reorganized company.

HANDS RRs A LEMON: Figuratively speaking, that is. The revenue-producing lemons move by water. The railroads can't indulge in rate competition with coastwise ships for perishable traffic if the I. C. C. listens to its Examiner Archer. The railroads should maintain a differential of 5.6 cents per 100 lb. *above* the water lines on citrus fruits from Florida to Baltimore, Archer contends—despite the enormous loss of this traffic to water lines by the railroads along the seaboard.

SOUND & FURY VS. TOLLS: The rabble-rousing politicians and the alleged "spokesmen" for motorists are raising particular hell about the measly tolls of 10 cents which Connecticut and Westchester county, New York, have slapped on the use of a couple of their superelegant parkways. Anybody who has driven over one of these parkways—and who thinks his own thoughts instead of those handed to him ready-made—knows that he is getting

a bargain in paying only a dime for using such a highway. Moreover, if he happens to own his home, he knows that *somebody has got to pay for these roads—and if they are not paid for by the users, the householder will find them on his tax bill.* Reports about motorists being "up in arms" at these legitimate charges for costly facilities sound like the bunk to us. In the first place, there isn't any class of people in this country who consider themselves primarily as "motorists." And, when it comes to such catch-phrases as "soaking the motorist," there isn't a householder who is not getting "soaked" on his taxes far worse than any levies being put on his use of an automobile.

PORTABLE REEFERS: The Western Classification Committee has an application for rates on perishables in refrigerated containers, which would assess the shippers only on the weight of the contents—the containers to be carried free by the railroads. These containers (using dry ice as a refrigerant) have successfully transported a large variety of traffic. (In cold weather they can be heated by a charcoal fire.)

CHEAPER FARES IN S. E.: The Southern roads are putting in a first-class round-trip rate at $2\frac{1}{4}$ cents per mile (which, incidentally, is the base rate for round-trip coach travel in Eastern territory). The round-trip first-class rate heretofore has been $2\frac{1}{2}$ cents, with a six months' return limit—and this rate will be continued (the $2\frac{1}{4}$ -cents rate having a 30-day return provision).

ARTHUR WHITE IS HIRING: Assistant Director White of the I. C. C. Bureau of Statistics is hiring the extra staff needed for his cost-finding program—and so far has put Dr. Ford K. Edwards (of the California Commission) and A. V. Vallandigham (formerly of the D. & H.) on his temporary pay-roll.

BUS REVENUES UP: In May, the bus companies which report to the I. C. C. disclosed a total take 11.4 per cent greater than in May, 1938. (Railroad passenger revenues, excluding commutation, in May were up only about 3 per cent over last year).

RR's LOSE AUTO TRAFFIC: Figures just issued by the I. C. C. show that the railroads got less than 38 per cent of the traffic in new automobiles last year. The motor manufacturers shipped about 55 per cent of their cars by highway and more than 7 per cent by water. Of the "big three" companies (General Motors, Chrysler and Ford), General Motors was relatively the best railway patron—using rail service for almost 49 per cent of its shipments. Chrysler was a 37 per cent railroad patron and Ford trailed along with only 20 per cent of its shipments made by rail.

CLASSIFICATION PROBE: The railroad committee which is studying the classification of freight (independently of the I. C. C. investigation in the same field) is going around the country to give shippers an opportunity to present their views. A schedule of the cities which the committee will visit (and when) is given in the news pages herein.

FREIGHT CAR INQUIRIES: Four different railroads are in the market for a total of more than 3,700 freight cars—details in the news pages herein.

11,351 COOL CARS: This is the total of air-conditioned cars (railroad and Pullman) in service on July 1. Of the total 6,327 were owned by the railroads and 5,024 by the Pullman Company. In the year ended July 1, more than 500 cars were air-conditioned.

TIE-HANDLING METHODS CHANGE: Fewer "concentration yards" (where cross-ties are brought by producers for shipment) are needed nowadays—with good roads and trucks replacing mules and oxen. Consequently, more careful methods of stacking ties are now economically feasible at these yards. An article in this issue describes the changed methods of tie handling of a well-known producer.

CRITICS CHALLENGED: The author of our series on "What Will the Traffic Bear?" has heard that some people are calling him a "theorist" and in his article this week he offers to prove any of his contentions to any fair-minded person who will give him a chance to hear what his critics are saying.

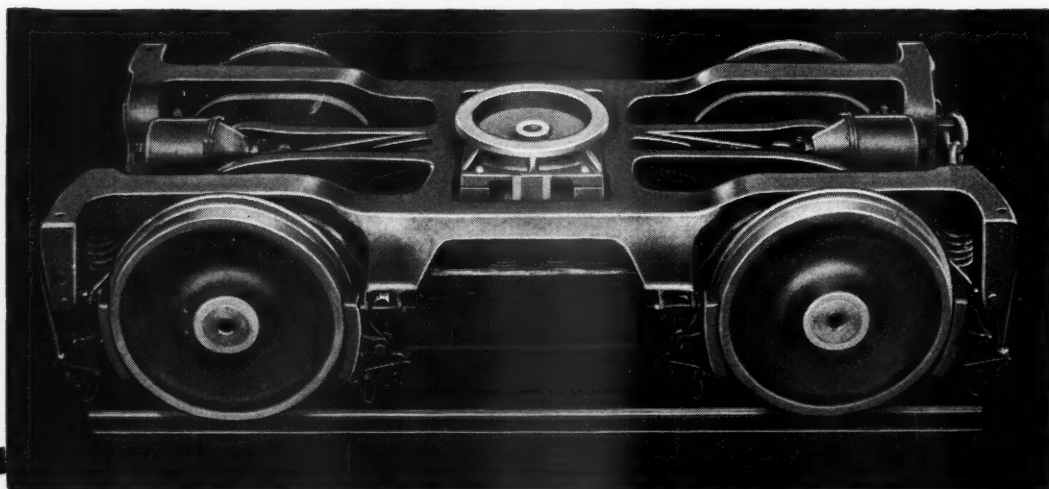
SLOW ORDERS DISAPPEAR: The multiplication of high-speed trains has curtailed the use of slow orders by the roadway department, and has forced a general change in practices, which have not yet settled down to a new standard basis. An editorial in this issue suggests further co-operative effort by operating and engineering departments in order to strike a balance between interference with trains and the extra-maintenance cost which non-interference inevitably entails.

TRUCKS PROSPERED IN '38: With the I. C. C. statisticians at last getting their heads above water in the deluge of work which came their way with the Motor Carrier Act—we are beginning to get some real information (replacing guesses) on motor carriers. Trucks reporting earnings to the I. C. C. showed a total take of 317 millions in 1938 (and the I. C. C. thinks this is less than half what all interstate trucks received, since only the big fellows report earnings). This 1938 gross was only 4 per cent less than that of 1937 (railroad freight revenues dropped 15 per cent in 1938). Net operating revenues of the truckers in 1938 were three times those of 1937, while net railway operating income of the railroads declined 37 per cent.

COMMONWEALTH ENGINE TRUCKS

WITH ROCKER TYPE CENTERING DEVICE

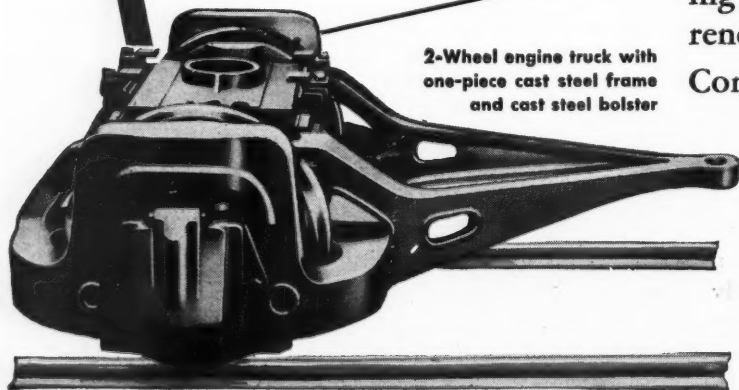
4-Wheel engine truck with
one-piece cast steel frame
and cast steel bolster



The importance of a correctly designed and properly functioning engine truck in modern high-speed locomotive operation cannot be too strongly emphasized, as, in addition to being a load carrying truck, it also guides the locomotive.

COMMONWEALTH trucks fully meet these requirements.

2-Wheel engine truck with
one-piece cast steel frame
and cast steel bolster



COMMONWEALTH two-wheel and four-wheel engine trucks are arranged with the rocker type centering device which has proved, through many years of service on thousands of locomotives, to be a simple and effective type of centering device to properly control the lateral movement of the truck and the locomotive.

The truck frames and bolsters are one-piece steel castings and all wearing surfaces are protected with hardened spring steel wearing plates. The bolsters are furnished with renewable rocker bearings.

Commonwealth 4-wheel engine trucks are fully equalized and are furnished with either elliptic spring suspension or a newly developed coil spring arrangement.

**Commonwealth Products
are Engineered
to Meet Modern Needs**

GENERAL STEEL CASTINGS

EDDYSTONE, PA.

GRANITE CITY, ILL.

The Week at a Glance

NOT READY FOR WAR: The railroads are not ready for a war in Europe, even if the U. S. should stay out of it. The last big war brought an increase of 19 per cent in railroad freight traffic even before the U. S. got in. The leading editorial herein analyzes the railroads' present dangerous state of unpreparedness and points out that **truck competition does not "relieve" the railroads of any part of the problem, but rather makes it more serious, because, under war conditions a large part of the traffic now being handled by trucks would probably be dumped back on the railroads.** It is suggested that the A. A. R. immediately and forcibly put the facts of their present state of physical emaciation up to the political authorities so that, if war catches the carriers with their britches at present low altitude, the public will at least not be misled as to who is at fault.

TRUCK TRAFFIC UP 22%: Truck loadings in July were 21.7 per cent above July last year, whereas carloadings on the railroads in the four July weeks were up only 12 per cent above those of the same weeks in 1938.

OLD COLONY REPRIEVE: Abandonment of a large part of the passenger service on the lines of the Old Colony in Eastern Massachusetts has been postponed from September 24 to the end of the year—following a meeting of representatives of the embattled citizenry with spokesmen for the security holders at New Haven this week. Meantime, the Bay State politicians hope to find some alternative means of continuing to provide transportation for this area at less than cost.

NET UP SOME IN JULY: July's net operating income was 49 millions (if the railroads earned at this rate for an entire year, they would ring up about 538 millions—or 75 millions shy of meeting fixed charges). For the seven months the net take was 215 millions (at the rate of 432 millions a year—or about 43 millions shy of paying interest on bonds, let alone rent for leased lines). However, bad as they are, these seven-months figures are darn near double what they were last year. The starving man's ration has been raised from one spoon of soup a day to two.

UNMASKING BUSINESS REDS: If any other editorial voice beside our own has, up to now, been hollering "Communist!" at the stuffed shirts of Big Business we don't know whose it is. But now we have got some distinguished (if somewhat more polite) company. Last week the Saturday Evening Post printed a cartoon showing a business man addressing an audience, demanding government economy; and, below that, another picture of the same guy haranguing a similar audience, demanding a big appropriation for dredging Mud Creek. This week the Post prints the names of the corporations which are the principal beneficiaries of the govern-

ment's silver purchase program (one of these outfits paid dividends of \$2.20 last year on stock with a par value of 10 cents!) If the Post is looking for more of these "fellow travelers" who manage to hide their Bolshevik whiskers behind a bland Babbitt pan, we invite it to take a look at the vessels on the country's improved inland waterways. Here is unrefined and undisguised state socialism—and its patrons read like a list of "Who's Who in Big Business."

DIABOLISM IN NEVADA: The full degree of the depraved cunning of the wreckers of the "City of San Francisco" is revealed in a statement by S. P. President McDonald, published herein. A spot was chosen as isolated as possible, delaying succor to the injured to the utmost. High embankments, a curve, a river and a bridge were the other characteristics of this location, guaranteeing to the devils who did the deed that their crime would spill the maximum of innocent blood. Mr. McDonald gives assurance that the law—all the way from the G-boys down to the local deputies—is hot on the trail of these butchers, and that there are many clues.

HEAVY RAIL SAVES: Track maintenance costs are reduced when heavier rail is applied—such is the conclusion of a sub-committee of the A. R. E. A. whose findings are reported herein. The committee had data from 39 railroads and noted a strong tendency toward heavier sections on most of them throughout the past two decades. The principal saving comes in reduced labor necessary to keep track in line and surface, while high speeds make the heavier sections imperative as a safety measure. Prolonging tie life and reduced punishment of the ballast are other advantages disclosed by the committee's study.

COST RATES FAVOR RRS.: The railroads seem to have the trucks licked all hollow when it comes to competing with them for relatively long-haul traffic on a basis of comparative costs. An I. C. C. examiner's report has been made public on rail-truck competitive rates between Los Angeles and Arizona—the investigation being instigated by truckers who wanted the I. C. C. to force the railroads to increase their rates high enough to enable the truckers to go after this traffic and earn a profit on it. The truckers threaten to go out of business when their equipment is worn out if present rates are continued—and the examiner says, in effect, that that is what they should do. For instance, the present rate from Los Angeles to Yuma, 253 miles, is 20 cents; the rail cost is 11.4 cents and the truck cost is 28.1 cents. To force the railroads to raise their rates, says the examiner, would be "regulation in the interest of the high-cost agency rather than in the public interest." Commissioner Beamish of Pennsylvania might find this report interesting.

C. N. R. HEAD-END CARS: Mail-and-express and baggage cars built recently for the Canadian National are pictured and described elsewhere in these pages.

SOUTHERN SAVES MONEY: This road has secured a revocation by the I. C. C. of its scheme to sell a half-million dollars of equipment trust certificates to the R. F. C.—reason, a better bargain from a private lender. By increasing its down payment, the Southern was able to get the money for less than 2 per cent, as compared with the 4 per cent Uncle Shylock wanted. The bargain money situation still holds in the equipment loan area—even the busted roads getting such funds at very little more than 2 per cent.

DYNAMIC DICK: Pennsylvania's vigorous Utility Commissioner Richard Beamish made a speech at the Regulators' Seattle convention last week (reported herein) in which he further expounded his theory of truck-rail competitive rates. Briefly, he wants the two competitors to charge the same rates. Fully appreciative of the chaotic condition which Mr. Beamish wishes to correct, we nevertheless do not think he has got the right formula. It doesn't seem to us that a regulatory body does much to "preserve the inherent advantages" of an agency of transportation when it prescribes the same rates for that agency as it does for a higher-cost rival. Moreover, such regulation leaves out of account the private carrier. He laughs at all regulators and—if they refuse to consider costs in making competitive rates—then the private carrier will turn the regulated rates into "paper rates."

THE SICK LION: When a fellow quits taking chances to get ahead—but just tries to hang on anxiously and fretfully to what he already has—that fellow is easy meat for an aggressive competitor. Such is the contention of our What-Will-the-Traffic-Bear authority in this week's article. Since it is an elementary principle that the **best defense is the offensive**, it is no damn wonder that railroad traffic continues to trickle away to the trucks; because where in the whole railroad picture is there any general offensive under way to create (as the railroads used to create) a growing volume of freight traffic?

CONTROLLING OPERATING COSTS: Specific details about daily, weekly and monthly reports from the accounting department which will permit operating officers to keep operating expenditures in line with revenues is the subject of an article by E. H. Bunnell, accounting vice-president of the A. A. R., which is published herein. The pros and cons of concentrating bookkeeping activities in the accounting department rather than scattering them throughout other departments are set forth in an editorial article.

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Full box section bolsters . . . strength . . . all the way . . . including spring seat section . . . no added weight of a complicated design.

Double-truss side frame . . . proper metal distribution evolved through 15 years of test . . . large bolster bearing areas . . . large one-level spring seat.

Standard springs . . . easily inspected . . . easily removed . . . any balanced arrangement desired. Plain rectangular shims . . . quickly inserted at an accessible location.

**SELF-ALIGNING
spring-plankless
TRUCKS**

All these recognized advantages are found in Self-Aligning Trucks, plus a spring-plankless design that permits flexibility . . . maintains a large bearing area between bolster and side frame . . . limits angularity by large radial stops.

Over 50,000 car sets have been ordered

AMERICAN STEEL FOUNDRIES

Do not fail to see "Railroads on Parade" at the New York World's Fair

The Week at a Glance

POLLYANNA PUBLICITY: For the railroads to permit the public to have the impression that "We're doing okay, Buddy" is the reverse of sound business when, actually, the plant is in a deteriorated condition. The leading editorial herein cites figures on the antiquity of rolling stock and the physical decline in track maintenance as evidence that the carriers are in no condition to handle such a boom of traffic as war might bring. Further, it contends that many railroads have no "fat" to live upon through a period of operating deficits, and that rising costs could bring such deficits even under conditions of heavy traffic.

PUBLIC OWNERSHIP: Most people do not favor government ownership of railroads—but neither are they very scared of it. In the first place, they do not realize that it would come very quickly if operating deficits threatened important carriers with abandonment or badly curtailed service, nor do they realize that such an eventuality is far from impossible. Secondly, they do not recognize wherein government ownership might harm their personal fortunes. Railroad public relations efforts, in our editorial opinion, should direct itself toward clarifying the public mind on these points—aiming not at its magnanimity but at its pocketbook nerve.

ANECDOTE: Illustrative of the opinion given in the foregoing paragraphs is the story of the young man at a taxi dance hall. Asked by a hostess why he was not dancing, he first contended that he had moral scruples against it. Importuned again, he next begged off because he did not know how to dance. That excuse proving unconvincing, he finally broke down and admitted that he had no money—and the importunities ceased forthwith. Moral: the railroads have appealed to ethical principles in their defense; they have, as a second approach, argued the case of prosperous railways making for a prosperous community—and still the results have been meager. Should they not now, then, try the direct appeal to elementary self-interest (an easy language that anybody can understand)?

PURCHASES UP 34%: In the first six months of 1939 the railways spent 403 millions for materials, equipment and fuel—an increase of 34 per cent over the first half of 1938 (but a decline of 40 per cent under the same period of 1937). Equipment purchases were 53 per cent greater than in the first half of last year. Details, with charts and tables, are given in an article herein.

GARRETT PUTS THE FINGER: The article which the train service brotherhoods tried unsuccessfully to get the Saturday Evening Post to modify or withhold appears in its issue of September 9. The subject is "Peace on the Rails" and the author, Garet Garrett, punctures the fine

bureaucrats' myth that the absence of strikes on the railroads necessarily evidences a healthy state of affairs in railroad labor relations. After all, there was peace in Europe too as long as Hitler was given all he asked for. In spite of the protests of "Labor" that the article is "propaganda," it is, nevertheless, written right from the record. Many railroad employees will find it informative and most of them, we believe, if they are honest with themselves, will agree with it. It is certainly to the point that a joint management-union committee is now discussing proposals to end the abuses of that kangaroo court in Chicago. The sooner wages and working conditions are made to accord with the earning capacity of trains, the sooner will line and train abandonments cease and railroad jobs become secure once more.

3,000 FREIGHT CARS: In the equipment columns in the news pages herein we are reporting orders for 3,000 freight cars.

L. A. COACH YARD: Many modern facilities contributing to ease of caring for passenger cars are provided at the Southern Pacific's new Los Angeles coach yard—described and pictured herein. Paved working platforms, floodlighting, complete installation of air, water and steam lines and power circuits for battery work are one feature. Others include a battery plant and separate structures for the commissary department and the Pullman Company.

PELLEY OPTIMISTIC: In answer to "reports which appeared in certain newspapers" to the effect that the railroads would have difficulty in handling a marked increase in freight traffic, President Pelley on September 6 issued a statement saying: "The railroads can handle at least 25 per cent more traffic than they are now handling, and by repairing approximately 200,000 freight cars and 8,000 locomotives now awaiting repairs, they could handle 45 per cent more than the present business." "If and as additional equipment is required," he added, "it can be had, and the railroads can and will keep ahead of any demands that may be made upon them."

OUR OWN GOEBBELS: Hitler in "Mein Kampf" laid down as one of his propaganda principles, in effect, the proposition that if the story put out is tall enough and audacious enough the propagandist needn't worry; it will find plenty of believers. We recall this penetrating observation in reading an analysis of the barrage of truck propaganda now being energetically directed at the American people. "Tax diversion," "trucks pay 417 millions in taxes while the railroads pay only 328 millions," "trucks employ 3.5 million men," "Balkanizing America," all these and other such contentions are taken apart in this analysis, all of them eloquently evidencing the profundity of the Fuehrer's observation.

LABOR DAY TRAFFIC: Carriers entering New York did an encouraging passenger business over the Labor Day weekend. Outbound business was, on the whole, about the same as last year, while inbound passengers (on account of the Fair) were up about 30 per cent. The Fair had its biggest attendance to date, and so did the Long Island's shuttle service to the Fair grounds.

"PUBLIC UTILITY" ROAD THEORY: Are our highways a *social service* to be paid for in large part by general taxation (as are parks, police and schools) or are they, on the other hand, an *economic service* (like electricity, housing, food and railroad transportation) to be paid for by the users? The professors and public officials in the pay of the truck propaganda bureau have taken up the cudgels for the former theory—while independent scholars whose opinions are not for sale are inclining more and more to the latter. A short time ago we called attention on this page to the article in the current Quarterly Journal of Economics by R. C. Breithut. Now, in the August issue of The Journal of Land and Public Utility Economics there is an article by Professor E. D. Allen of Iowa State College further advancing the public utility theory.

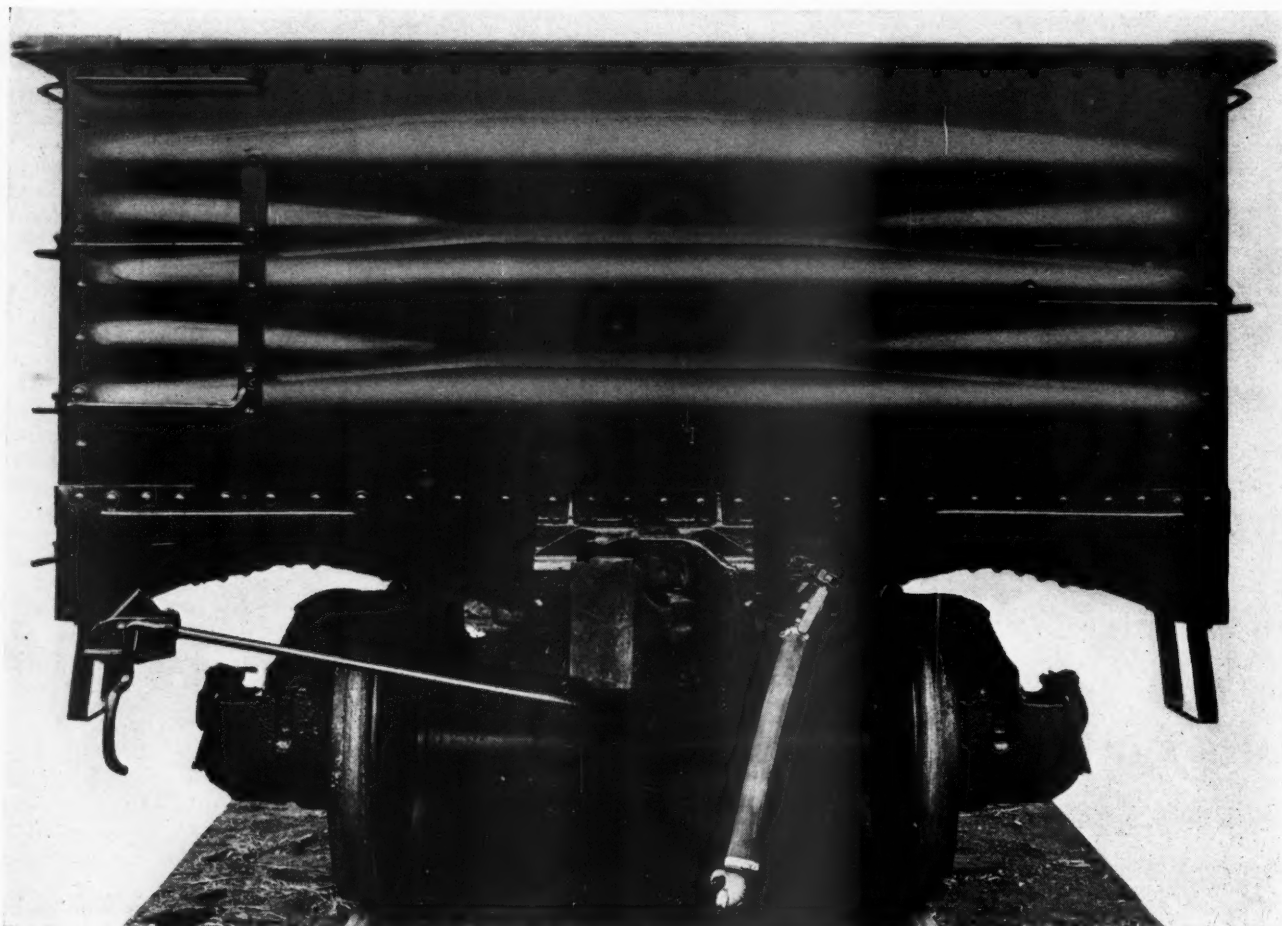
SOCIALISM VS. ENTERPRISE: It is not too much to say that the future of the railroads depends largely on which of these theories is the victor. Railroad users have to pay on the "public utility" theory, without any help from the taxpayers. Hence, it goes almost without saying, that highway users must pay for highways on exactly the same "public utility" basis unless there is going to be the grossest kind of discrimination against railroad transportation and in favor of highway transportation. Railroad transportation probably cannot continue as a private enterprise if such discrimination becomes a settled policy. It is reassuring, therefore, to note that so many competent scholars—not on any partisan's payroll, but guided solely by their intelligence—are inclining to the "public utility" view.

D. L. DE LUXE: A dining car and a buffet-lounge which have been completely rebuilt as to interiors are described in an illustrated article herein, embodying innovations in both lighting and interior decoration.

AGREED CHARGE VICTORY: The Canadian railways won out before the Dominion Transport Board last week on the first of their "agreed charges" about which dissension arose. An agreement was entered into between the railways and the major oil companies in Ontario under which the latter received lower rates, but bound themselves not to use highway tanks of over 1200 gallons for hauls over 25 miles. A smaller oil company complained but the Commissioners upheld the agreement anyhow.

DREADNAUGHT STEEL ENDS

**PROVIDE UNIFORM STRENGTH
OVER THE ENTIRE SURFACE
AND
EFFECTIVELY CUSHION SHOCKS CAUSED
BY SHIFTING LOADS**



**STANDARD RAILWAY EQUIPMENT MFG. COMPANY
CHICAGO**

The Week at a Glance

PREPARED OR NOT?: We have examined the figures on which the A. A. R. bases its estimates of the ability of the railways to handle a largely increased traffic with existing equipment and, as the leading editorial herein expresses it, we have nothing further to say now—except that what we have seen gives us no reason for withdrawing our own estimates.

LESSONS FROM LAST WAR: Questions as to the extent to which the railroads may or may not be presently prepared for war, however, should not detract attention from the goal of keeping the railroads out of government operation whether war comes to America or not. And the only safeguard against that eventuality is the legislative cure of the causes which are keeping the railroads poor. As the leading article in this issue points out, government operation in the last war solved no problems which could not have been solved better, and vastly more economically, under private operation.

HOW RESTORE EARNINGS?: The principal changes needed to restore the railroads to such a financial condition that government ownership will not be a threat, the leading article goes on to say, are (1) the provision in pending legislation to study transportation subsidies with a view toward eliminating them and (2) the moves initiated by the railroads and the I. C. C. to revise the rate structure, putting competitive rates on a cost basis. There can be no division of traffic between competing agencies on the basis of their comparative economy (a division imperatively required if the public is to have the most economical transportation) unless *competitive rates reflect comparative costs*. Rate modernization (wherever competition is a factor) is, therefore, just as necessary to restoring economic health to transportation as is a cessation to subsidies.

WAR vs. HOME PROBLEMS: Now that there is a war to watch, how is public interest (including that of railroad men themselves) to be continued in such questions as transportation subsidies and rates which will insure economy in transportation competition? The answer, we believe, is: In showing the people that *the transportation problem is a part of the problem of national defense*; and in particular that it is the War Department's business to prepare to defend this country, and not to waste its brains and the people's money, as it now is doing, in the endeavor to put the country's most essential transportation agency on the retired list.

BARGING IN: The Mississippi River Carriers Association, which carries goods in trainload quantities by barge, has been given permission by the I. C. C. to intervene in the suspension case involving trainload rates by the I. C. and the Mo. P.

This association let out loud howls against water carrier regulation by the I. C. C. when hearings were held in Congress on the pending transportation bill. To them, apparently, regulation is simply a device to keep a competitor from competing. They are taking full advantage of regulation of the railroads while insisting on being free from it themselves. Nice going—if they can make it stick.

SOUTHERN DIESELS: Six two-car Diesel-driven trains which are going into local service on the Southern are described in an illustrated article herein. The new outfits will replace six steam locomotives and 16 passenger train cars.

"ALL FREIGHT" RATE PROBE: The I. C. C. has announced a general investigation into "all freight" rates between Ohio and Mississippi river points and Chicago into Southern territory. The Commission wants to find out, among other things, the effect of these rates on railroad revenues, and what they are doing to other rates, both railroad and competitive.

L. C. L. QUESTIONNAIRE: The railroads have received a questionnaire from the I. C. C. on which they have got to describe in detail the l. c. l. and forwarder traffic which they handle during the first week in October and the Express Agency is going to be tagged with a similar duces tecum. The information is for the Senate committee which is going into this knotty and touchy problem. The railroads have let it be known that they are playing ball with this inquiry by request and not because they feel so inclined.

UPPER MISS. DITCH: A cool-headed economist with no interest in the railroads has recently had the curiosity and the patience to wade through the War Department's often-confusing figures on the way it has been spending the people's substance in the endeavor to make an ocean out of the upper reaches of Old Man River. We present his findings in an article herein. And, frankly, we print this piece with some misgivings—because it would be just like some wiseheimer in the Reichspropagandaministerium (or whatever Joe Goebbels calls his office) to circulate such an article as this as an indication of how things are done in a democracy.

PAY FOR NON-BUMPERS: If a furloughed railroad employee has a right to "bump" a man who is working but doesn't do it, his failure does not disqualify him from getting unemployment insurance—according to an opinion recently handed down by the law office of the Retirement Board. Under the law, the furloughed employee is disqualified from unemployed pay only if he turns down an offer of a job. The fact that a job waits for him if he bumps somebody is not considered to involve an "offer."

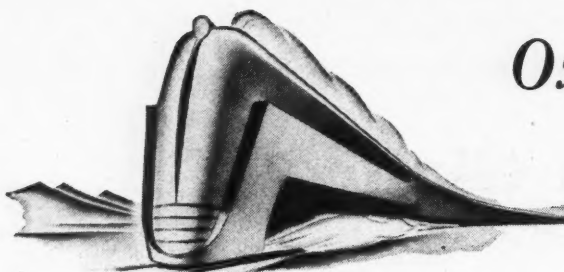
SICKLE & SWASTIKA: Tempting railroad labor to plump for government ownership by holding out to them promises of more money, more jobs, vacations with pay, the 30-hour week and the 6-hour day is the latest boob trap baited by the Reds. Their so-called "Labor Research Association" has issued a pamphlet (apparently intended for mass circulation among railroad employees) called the "Railroads in Crisis" which promises all these boons and many others besides, if only the railroaders will do homage to Marxism (or has Hitler replaced Marx as the Red god?) in the form of socialized railroads.

MORE JOBS: Railroad employment at the middle of August totaled better than one million—which was up about 7 per cent over the same date in 1938.

EQUIPMENT ORDERS: Cheerful news of revived activity in the equipment and materials sector will greet the eyes of those who turn to the page in this issue which is consecrated to such developments. Feelers are out for about 2,500 freight cars and an additional 2,500 have already been ordered. There are also almost 100,000 tons of new rail orders, an order for 20 electric locomotives and a rapidly reviving repair movement is under way.

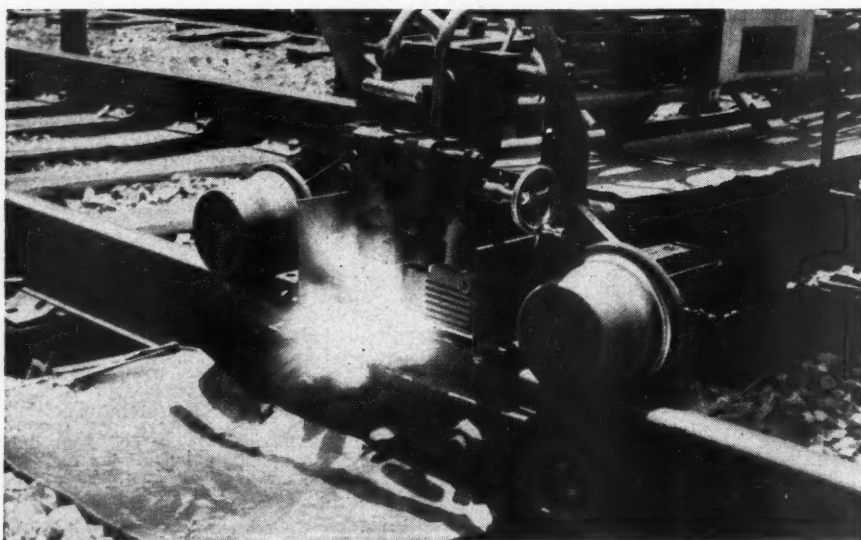
SACRAMENTO SHOP: A sharp reduction in the cost of locomotive repairs plus less shopping time, thereby increasing the availability of its power—these have been the rewards to the Western Pacific for the \$460,000 it spent to modernize its locomotive shop at Sacramento. An illustrated article herein describes the new facilities. (Illustrative of the difficulties the W. P. encountered before it made this improvement is the fact that, in its old shop—dating back only to 1913—neither the transfer table nor the crane equipment could handle the larger locomotives, and only one pit track could take them.)

W. P. A., TRUCK BOOSTER: If Joe Goebbels over in Berlin ever runs short of competent assistants, we refer him to the truck interests' propaganda bureau in this country for likely recruits. These birds not only are turning out some of the most skillful half-and-minus truths which are now being peddled to the public—but they have even cajoled several government bureaus into pushing their propaganda at the taxpayers' expense. The Department of Agriculture has heretofore played the catpaw for these local Goebbels—and now the W. P. A. has turned out an 88-page job in their behalf. According to this W. P. A. opus, for a state to tax a truck registered in another jurisdiction or to limit its size or weight is metamorphosed from the fair exercise of recognized states' rights, which is all it is, into a damnable barricade against the flow of interstate commerce.



Oxweld Railroad Service TOPICS

1912 — OVER A QUARTER CENTURY OF SERVICE TO AMERICAN RAILROADS — 1939



OXWELD RAIL-END HARDENING

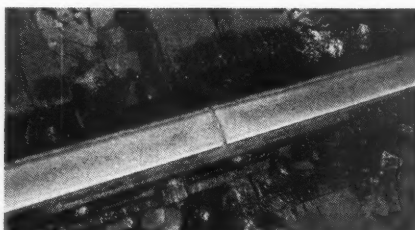
Economical, Efficient, and Easily Done

End-hardening of all new rail to postpone batter is now standard practice on most railroads. The Oxweld method provides one of the most economical, efficient, and convenient means of rail-end hardening. The initial cost is low and the resulting savings in joint maintenance expense are substantial. This method permits the uniform production of adequate hardness for the rail service requirements. The work can be readily performed in track without interrupting traffic and without tying up railroad equipment.

AS GOOD AS NEW

After 4 1/2 years

The rail ends shown in the illustration were hardened by the Oxweld method early in 1935. They have been in service ever since in busy main line track and show no sign of end or secondary batter. Rail ends hardened by Oxweld five and six years ago are now as level and free from unevenness as newly-laid rail. Indications point to the strong probability that these rail



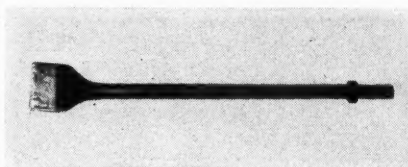
ends will wear evenly with the balance of the rail and will require no special attention during the entire rail life. The heat-treating pattern is still visible.

BRIEFS

Butt-Welded Rail — Smooth-riding, clickless track and the elimination of signal bonds and joint maintenance are among the advantages of butt-welded rail which can be obtained with the Oxweld Automatic Pressure-Type Rail Welding Process.

Building-Up Rail Ends — Reduced wear on joint bars and ties and longer life for rail are among the factors which contribute to lowered maintenance costs when battered rail ends are built up by oxy-acetylene welding.

Hard-Faced Tamper Bars — It has been found that tamper bars hard-faced with Haynes Stellite alloy have 2 to 3 times the normal service life. The hard-facing rod is applied at the end of the



bar in a band about 2 inches wide. A newly hard-faced tamper bar is shown.

In addition to bringing to railroads the oxy-acetylene process applications described on this page, Oxweld Railroad Service provides for installing welded signal bonds, reclaiming worn joint bars, rebuilding frogs and switch points, and Unionmelt welding. For complete information on any of these operations, consult The Oxweld Railroad Service Company, Unit of Union Carbide and Carbon Corporation, Carbide and Carbon Building, Chicago and New York.



The words "Haynes Stellite," "Oxweld," and "Unionmelt" are registered trade-marks of Units of Union Carbide and Carbon Corporation.

Plan to see the latest Oxweld development for using the oxy-acetylene process in maintenance-of-way work—Areas 90 and 91, Track Supply Association Exhibit, Hotel Stevens, Chicago, September 18-21.

The Week at a Glance

ATTABOY, A. A. R.! There is one job at which the railroad industry just hasn't got any superiors, and that is the handling of peak loads—especially when they have a chance to get ready for them. There is plenty of evidence this week that the railroads are fully awake to the tasks that may lie ahead of them, and that they are hitting the ball hard in effective preparation. There was no hint of the wistful Pollyanna in the statement which issued from Tuesday's member road meeting—but optimism based on real tangible measures now being taken toward getting the carriers in shape. The glint in the eye of these gentlemen indicates that they mean business.

WAR RAISES PRICES: Raw copper, lead, tin and zinc, raw cotton and rubber have gone upward in price as a result of the war—and railroads are, as a result, already paying higher prices for finished products made from these materials. Such is the report contained in a short article herein, which gives a quick survey of price trends on the things railroads buy. Some lumber prices have gone up (but not on ties). But steel prices have not advanced and neither have those for fuel—and “the railroads do not see a run-away market.”

NOT ENOUGH TIES?: Tie renewals in recent years have, on their face, indicated that a considerable degree of under-maintenance was piling up. But Vice-President Smith of the New Haven presents evidence in an article herein which substantiates his conclusion that, on the New Haven anyhow, a reduction in the number of ties applied does *not* evidence undermaintenance. Reason: that treated ties installed during the 'Twenties do not yet require renewal. An editorial discusses Mr. Smith's contention and agrees that it holds for any road which adopted treated ties at a comparatively late date—but it emphasizes that the instance of the New Haven would not hold on a road which standardized on treated ties at a considerably earlier period.

ECONOMIC PREPAREDNESS: A modern war is as much (perhaps more) a contest between economic organizations as it is between armies. The nation which most thoroughly eliminates waste in its organization of production is the one that puts the most and the best machines into the hands of its soldiers—and, consequently, is the nation which wins the war. Viewed in this realistic light, this country is sadly unprepared for hostilities—as the leading editorial points out. In transportation, for instance, the whole effort of public policy has for years been the destruction of mass production and the substitution thereof of transportation on a handicraft basis (one man for every few tons transported). **The necessity for military preparedness, therefore, does not dwarf the importance of recasting this country's**

transportation policy in the direction of sanity and efficiency. Instead it makes the necessity of such comprehensive reform more imperative and immediate than ever.

HOW MAXIMIZE PRODUCTION?:

The productive advantage of private enterprise, as opposed to socialism (either complete or diluted) is that, with private enterprise, production is entrusted to men who want to maximize it—not to gents who merely have comfortable political jobs which they neither get nor keep on a test of performance. So, to prepare America for the possible ordeal of war, nothing is so much needed as to take away the crimps which the politicians have put on the owners and managers of private business—thus removing their desire and incentive to produce things. And, certainly, with the danger of war facing us **what folly could be greater than that of the War Department—using its personnel and the public's millions to wreck the nation's chief reliance for transport while it forces forward a museum type of transportation—slow, seasonal and insanely wasteful?**

1917-1918 MISTAKES: There certainly exists no argument—not even a phony one—for the government to repeat the colossal blunder of 1917, viz. government operation of the railroads, in the event that (God forbid!) America should get involved in the present war. In 1918, under the Railroad Administration—for all its priority orders and other aids which the roads did not have under private operation—the railroads were able to move only 2 per cent more business than in 1917, while piling up a whale of a deficit despite greatly increased rates. The leading article herein deals definitively with this and other crucial questions of transportation policy upon which the minds of those in authority should be brought to quick agreement.

PACEMAKER, \$ MAKER: The New York Central's “Pacemaker” carried 14,500 customers and rang up a quarter of a million in revenue in August—its first complete month of operation. It didn't just take passengers off of other trains either—but pulled in a lot of entirely new trade, according to the company's figures.

POLAND IN ALA.: Alabama has been liquidated—not by tanks, it is true, but the next thing to them, namely giant trucks. For several years the state has protected its highways and the lives of its citizens by a 10-ton weight limit on trucks. But the Fuehrers and the Gauleiters of the local truck association demanded that this limit be hoisted to 20 tons. So the politicians “appeased” them, (temporarily at least) without bloodshed, by allowing them 15 tons. The truckers did not hurt their case any, it would appear, by hiring the governor's law partner as their counsel.

HOW THE ORDERS ROLL IN!:

Orders for more than 112,000 tons of steel are reported in this issue—and for close on to 5,500 freight cars, 2 rail motor cars, 2 steam and 9 Diesel-electric locomotives. Inquiries are disclosed for 12,222 freight cars and 18 Diesel-electric locomotives and a Canadian program of \$25,000,000 for equipment additions is announced.

NEW “400”: There is a picture of the new “400” train over in the news pages in this issue, and an account of its demonstration runs.

SHIPPERS' BOARDS SEE RISE:

A couple of shippers' board meetings are reported in the news pages in this issue. The boys see some big jumps in traffic ahead. (And our own investigation of advisory board estimates indicates that these gents have a tendency to underguess traffic on the upturn, while they overguess it downwise.)

EGYPT UP-TO-DATE:

The Egypt we mean is the one in Southern Illinois and the modernity referred to is the truck service the Illinois Central radiates out of Carbondale so that 66 local stations in this area get overnight service from Chicago and many other important points. The truck job is done for the railroad by the Railway Express Agency, and the details appear in the Motor Transport Section in this issue.

TRUCK RIVALRY ENDS IN FRANCE:

The French government has by decree put a complete end to railway and truck competition, according to a dispatch to the New York Times. Trucks will continue to operate in the short-haul field, but all long-haul traffic will move by rail. Naturally. When a nation is in a war which depends for victory upon the efficient functioning of its economic machine, it cannot afford the senseless waste of long hauls by truck (or extremely short hauls by rail). Of all sections of the world, only North America is left with money to burn for wasteful duplication in transportation—and the encouragement of traffic to move the most expensive way.

NEVADA WRECK PROBE:

The official findings of the I. C. C. examination into the derailment of the “City of San Francisco” have not been given out—but those of the railroad's own board of inquiry have been, and are summarized herein. The track in this territory is of the best—130-lb. rail, creosoted ties, all tie plated. There is a 60 m.p.h. speed limit, which was not exceeded. Full signal protection is provided. Conclusive evidence of a deliberate plan to wreck the train was given by the discovery at the point of derailment of a tie-plate which had plainly held a rail, moved 4½ in. out of alignment with other rails and spiked down in the new position. Additional confirmatory evidence was likewise disclosed.

More than
350 miles of
Freight Cars

... are equipped with
Self-Aligning Spring-Plankless
Trucks ... over 47,000 cars

Self-Aligning Spring-Plankless Trucks
under 47,000 freight cars offer the most
convincing proof of their dependability
and economy.



AMERICAN STEEL FOUNDRIES
SELF-ALIGNING TRUCKS

The Week at a Glance

EARNINGS PROSPECTS: The determination of the railroads to meet the transportation needs of any emergency which may arise will be immensely aided by the upturn in traffic and earnings. If the present trend of traffic continues, the leading editorial herein estimates, the railroads ought to earn around 300 millions of net railway operating income in the last one-third of 1939 (better than they have done in this period in any year since 1930, except 1936).

WHO "BROKE DOWN" IN '17?: Whose fault was it that the railroads in 1917 were unable to deliver the service required of them? Well, who was it who routed thousands of cars to the Atlantic seaboard and didn't unload them? Who was it who would not permit rate advances to meet rising costs? Who was it who issued a multiplicity of conflicting priority demands on the carriers? The railroads were organized in 1917 to cope adequately with the war emergency and would have succeeded if they had had an ounce or two of co-operation from the government. At that, the Railroad Administration which the government substituted for private management did a less creditable job, with government co-operation, in 1918 than private management did in 1917 without such co-operation.

GOVT. OBLIGATION TO RRs.: The determination the railroads are showing today is comparable to that which they manifested in 1923, with such a notably favorable outcome. It is also, the leading article in this issue asserts, parallel to the unity of railroad endeavor put forth in 1917—which failed to achieve its goal, because the government prevented it from doing so. For the present railroad effort to succeed, therefore, it is essential that the government continue at least that degree of intelligent concern with transportation problems which it indicated before hostilities in Europe broke out. The railroads are spending money "on faith." It is of the utmost importance that the beneficiaries of that confidence should act to justify its continuance.

"PHANTOM" CAR NEEDS: Some shippers seem to be developing something like hysteria about the possibility of a lack of freight cars to meet their requirements, and are ordering cars beyond their needs. This condition was brought out at the Kansas City advisory board meeting last week—and ways of guarding against it are discussed in an editorial herein.

TAXES A "TRADE BARRIER"?: The behavior of the truck crowd on this "interstate barrier" question has its parallel in the man who, coming upon the scene of a grade crossing accident, lay down among the victims so he would be there when the claim agent came around. That is to say, there are some indefensible barriers to commerce among the states, but legitimate taxation of out-of-state trucks is not one. Neither is a bonding charge on merchant

truckers a "barrier". Governor Stark made this distinction clear in his speech last week before the Advisory Board meeting at Kansas City, a couple of paragraphs from which are quoted in the news pages herein.

TRUCK TRAFFIC SOARS: In August, truck traffic was almost 25 per cent above that of August, '38 (compared to an increase of about 12 per cent in railroad carloadings).

THREE DESIGNS OF DINERS: Five dining cars of aluminum alloy construction, five of stainless steel and five of low-alloy steel construction—each group by a different builder—were recently delivered to the Pennsylvania, and are described in illustrated articles in this issue. All the cars are light in weight (well under 60 tons).

CANADA'S CATO: The Dominion Government has chosen as its war-time censor (press, radio, mail and cables) its widely-known citizen and "dean of publicity men", namely Walter Thompson, the C. N. R.'s publicity director.

WISE WORDS FROM JOE: Employees might find it more to their interest to try to make railroad service more economical and more desirable to the public—rather than insisting to the letter on rigid rules and privileges. Such was the counsel of Chairman Eastman delivered at a recent meeting of the New England Shippers Advisory Board, reported in the news pages of this issue. Mr. Eastman believes that victories for rigid working rules in such competitive times as the present are likely to do employees more harm than good.

NO INTEREST IN SHIPPERS?: At the same meeting of the New England Board, Mr. Bill Day, of Boston, disclosed that he had written 143 leading shippers asking them whether railroad traffic representatives had ever asked them questions as to their marketing problems and what the railroad might do to help solve them. He had 100 answers to this letter and 70 of them stated that never in the history of their businesses had railroad men asked them such questions.

YOUR HAT, MR. WOODRING!: Railroad employees in the Southeast who, under the name of the Mutual Transportation Committee, are carrying on an educational campaign against the spread of socialized transportation on the rivers, to the detriment of railroad employment, held their second annual meeting in Atlanta last week. They adopted a resolution decrying the War Department's assumption of expertness on transportation questions and insisted that all waterway projects should be passed upon by the I. C. C. In addition they called upon the War Department to get back to its job of national defense, leaving transportation to people whose proper business it is.

EQUIPMENT ORDERS: Eleven steam locomotives and 11,300 freight cars are among the equipment orders reported in the news pages herein. In addition, 27,000 tons of domestic rail orders are noted, with an export order for 23,000 tons (with 70,000 more tons pending). Two small freight car inquiries and one rather substantial one, and one for seven Diesel-electric locomotives, are likewise recorded. Several large inquiries in Canada are reported (which incidentally is hardly surprising in view of the recent soaring of Canadian carloadings).

WHITNEY, WATERWAY FAN: In the September issue of the Railroad Trainman, Mr. Whitney attacks, with his customary prolixity, the Omnibus Transportation Bill which all the other railway organizations are supporting. One of the extremely peculiar reasons assigned by him for his enmity to this measure is his fear lest it may "kill" inland waterway transportation. We doubt that this terror on President Whitney's part is shared by most of his members, particularly those who have lost their jobs because of the diversion of tonnage from the railroads to the rivers.

M. OF W. SAFETY: Among the many addresses and reports (some of which are presented herein) at last week's meeting of the roadmasters was a paper by Vice-President Smith of the Norfolk & Western dealing with safety in the roadway department. Pointing out that the casualty rate for this department is higher than that of the remainder of railway employees, he recorded a decline of 86 per cent in the roadway accident rate on his road since 1924, and then went on in interesting detail to explain how this improvement was brought about.

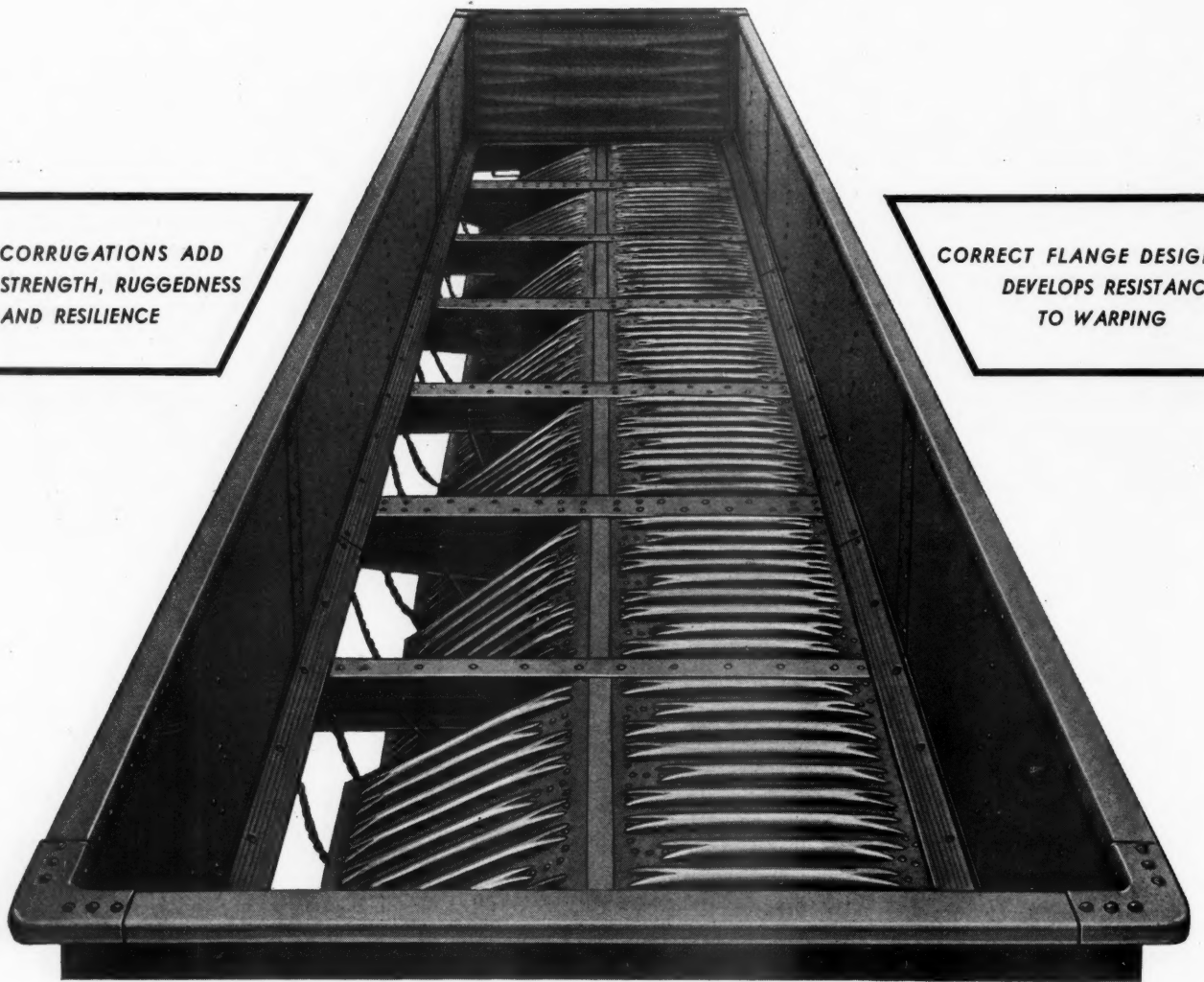
ACCIDENTS: Despite the increase in traffic over last year, both June and the first six months showed lower fatalities on the railroads than comparable 1938 periods. Personal injuries were up some in June though (over June last year) and there was a jump in train accidents from 395 in June, '38, to 420 in June, '39. Grade crossing fatalities in the first half of '39 totaled 680, a reduction of 16 from the like '38 period.

FORESEE TRAFFIC RISE: The Shippers Advisory Boards have estimated a traffic increase of about 14 per cent above last year for the fourth quarter. However, these estimates were made early in September before the recent sudden upturn in loadings had occurred—so, the Boards are now considering recanvassing their members with the belief that many of them may wish to revise their calculations upward. The Boards which foresee the biggest increases are the Northwest (26%), the Great Lakes (22%), and the Midwest, Ohio Valley and Allegheny (16% each).

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**REDUCE YOUR
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INLAND 4-WAY FLOOR PLATE

**-Also Keep Floor Maintenance Costs
Low for Many Years to Come**

Wherever people walk or work, slipping and falling accidents are a dangerous hazard.

One fourth of all the fatal accidents in 1935 was due to falls, exceeded only by motor vehicle accidents. One fourth of industry's accident compensation goes for falls!

Ever faster movements of people through passenger facilities and of freight through the loading and handling facilities of the railroads, require safer footing for customers and for workers.

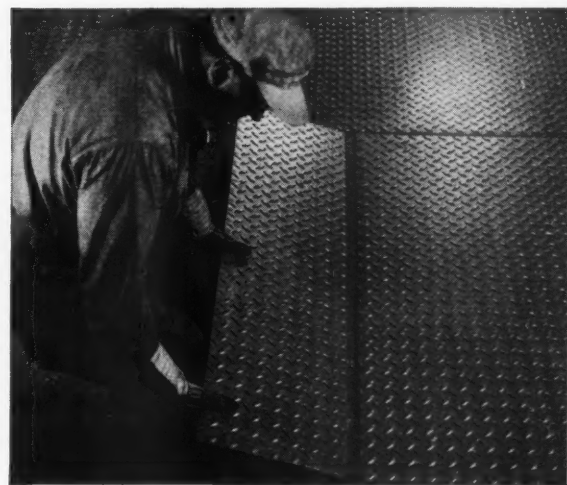
INLAND 4-WAY FLOOR PLATE is now being adopted by leading railroads because (1) it provides safe traction for foot or wheel in all directions, (2) withstands years of hard wear without repair costs, (3) is easily kept clean and drains quickly, and (4) makes an attractive, continuous floor pattern.

SEND FOR THIS BOOK

It illustrates the reasons why INLAND 4-WAY FLOOR PLATE is better suited to railroad use than any other flooring material.



Safe traction for foot or wheel in all directions, comfortable to walk upon and easily kept clean.



4-Way matching makes an attractive floor of unbroken pattern, which can be easily laid without waste.

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Diesel Streamliners operating at sustained high speeds subject motor support bearings, main and connecting rod bearings to terrific punishment.

That's why so many world-renowned American Diesel Streamliners are equipped with Satco-lined bearings. It's *the* modern bearing metal for modern, high-speed service!

Satco-lined bearings are designed for rapid cooling. They have a lower coefficient of friction and also greater hardness and compressive strength than ordinary bearing metals, at above-normal temperatures. The superior bondability of Satco metal to both steel and bronze eliminates a common source of bearing failures.

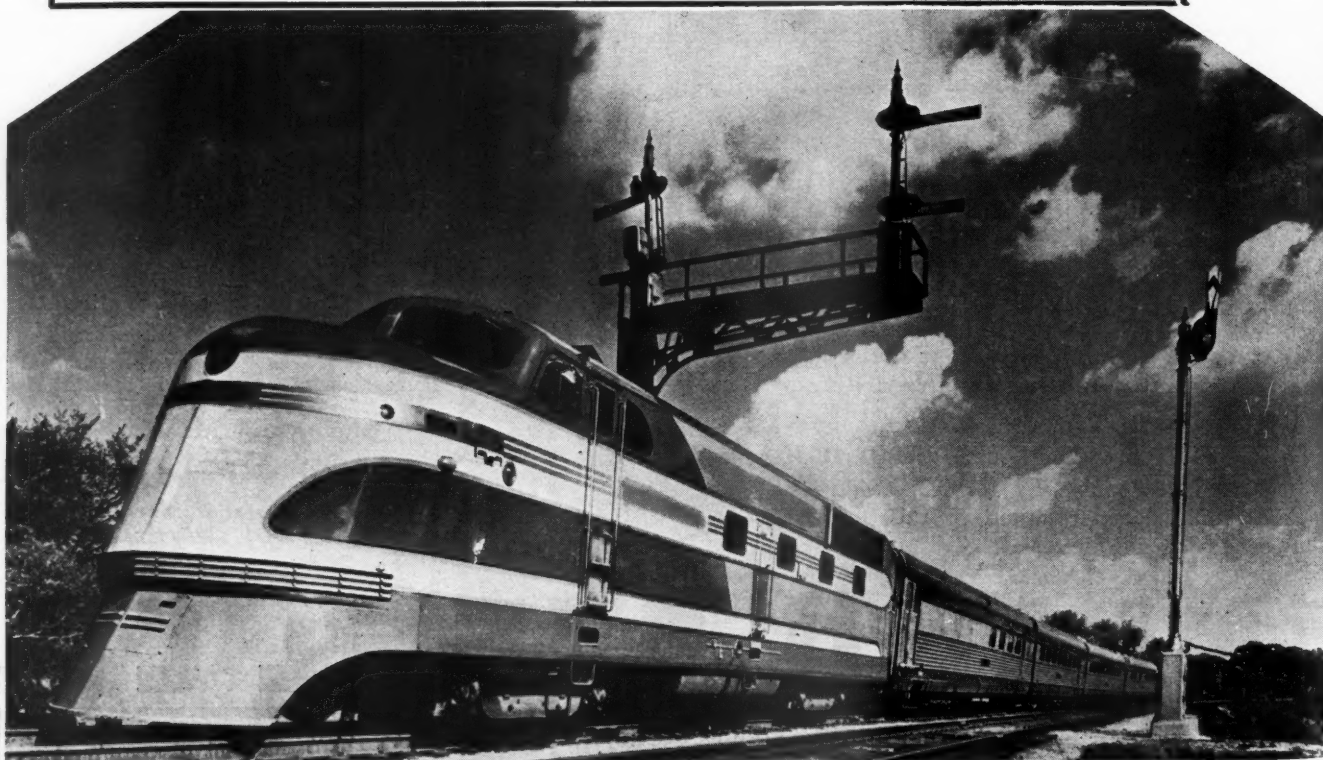
Engineering, Laboratory and Service Test Data will be gladly furnished on request.

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A Positive Heavy-Duty Stand



**...ideal for
main-line
service**

Bethlehem Model 53 is one of the most powerful, most rugged switch stands built. Parallel-throw, with ample leverage for the heaviest points, it is positive in action and low in maintenance.

Action is of the sliding block type: Power is transmitted from the throwing lever to a hardened, alloy-steel block. This block slides in a grooved forged-steel spindle. As the lever and block move through a vertical arc, the spindle turns horizontally. A heat-treated screw-eye crank couples the spindle to the connecting rod, and permits adjustment of length of switch throw.

This type of throwing mechanism provides powerful leverage at the start and finish of the throw. Also, it is positive in action: with the switch closed in either position, the stand is on dead center and cannot be thrown by any thrust against the points.

Bethlehem Model 53 has only three moving parts. The sliding block, which bears the brunt of most wear, can be given a new wearing surface by turning it 90 degrees. All parts can be operated in an oil bath, since the base of the stand is designed as an oil reservoir.

Model 53 is available in two types: 53-A is a low stand, 15 $\frac{7}{16}$ inches from tie to lamp tip. 53-B is an intermediate stand, 7 feet, 8 $\frac{3}{4}$ inches high. Both have broad bases which make the stands unusually stable. Both have locking ears cast integral with the base.

Many roads in several parts of the country have standardized on Model 53 switch stands for main-line switches. Their low maintenance makes them desirable for main-line service on any road.



BETHLEHEM STEEL COMPANY

**FINE
WORKMANSHIP**

**PROMPT
DELIVERY**

**2 PULLMAN
TRADITIONS**



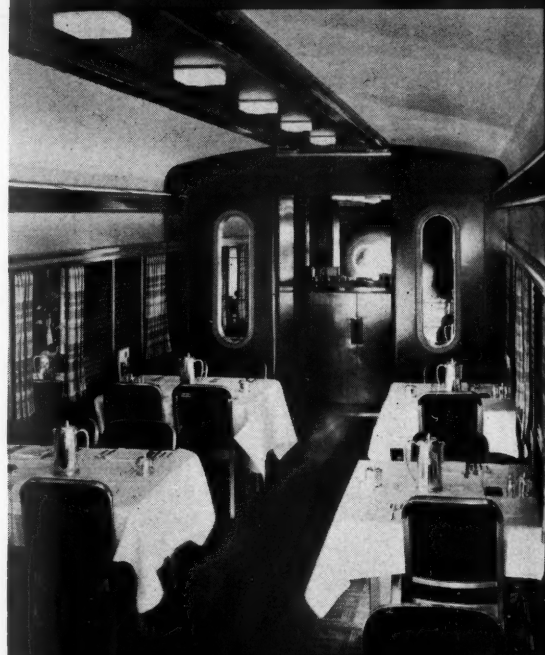
Among the questions most important to you as a purchaser of equipment are: first . . . *will the workmanship be first class?* . . . and second . . . *will delivery be made as promised?*

The five diners which we recently delivered to the Pennsylvania Railroad, we believe, answer these questions completely. They reflect the character of workmanship and the fulfillment of promised time of delivery . . . in keeping with the reputation established by Pullman-Standard

We take pride in the workmanship of these diners and hope you will inspect them.



Pullman-Standard is free to choose from all the available materials, the best ones for the purpose . . . **PULLMAN-STANDARD BUILDS YOUR CHOICE OF CONSTRUCTION**



PULLMAN-STANDARD CAR MANUFACTURING COMPANY

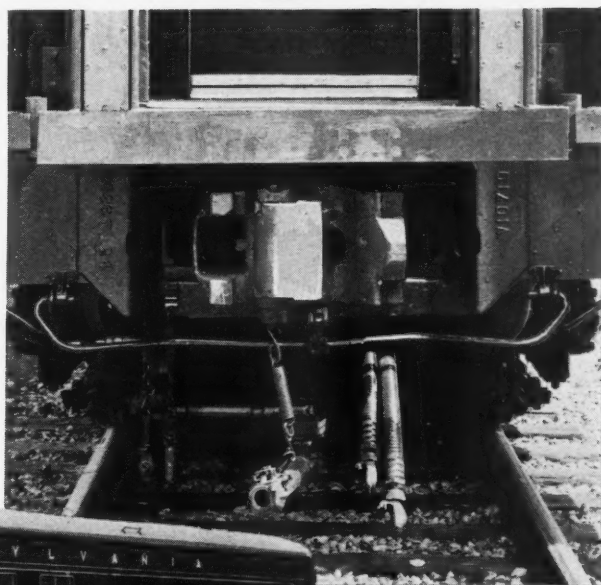
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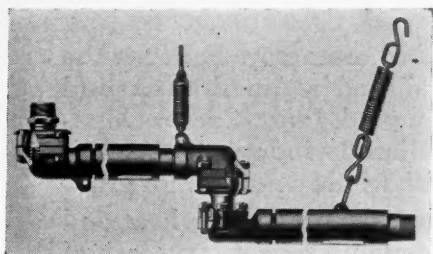
Modern Throughout

Equipped With
BARCO

FT-2 STEAM-HEAT CONNECTIONS



Above: Showing BARCO Horizontal Steam-Heat Connection on the new Pennsylvania Railroad diners built by American Car & Foundry Company and Pullman-Standard Car Manufacturing Company.



BARCO Car Steam-Heat Connections have Hardened Alloy Steel Metal Wearing Parts.



Streamline Dinners

recently built for the Pennsylvania Railroad by American Car & Foundry and Pullman-Standard, are all equipped with the improved FT-2 horizontal steam-heat connection designed for cars having low end valve locations.

These new diners, modern in every respect, join a long list of deluxe equipment on American railroads where Barco Products are contributing materially to safety, comfort and economy.

Modern super-power and high-speed trains demand *extra values* in locomotive and car specialties.

BARCO experience, engineering and precision manufacture are competently providing the *added* quality required today.

BARCO MANUFACTURING COMPANY

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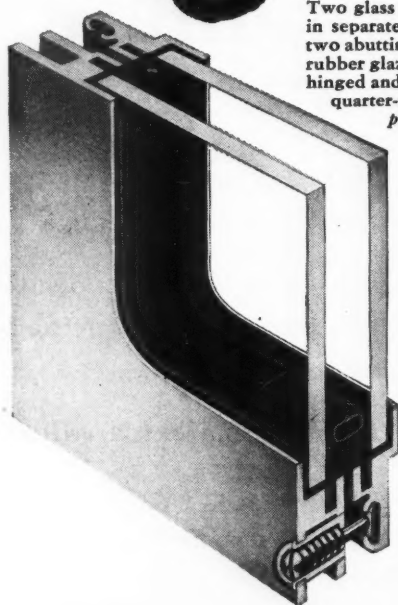
Toronto

Winnipeg

Vancouver



**Windows on Parade . . .
in Dining Cars of Tomorrow**
without
Fog • Film • Frost



Two glass panes, $\frac{1}{2}$ inch apart, glazed in separate metal frames. Separated by two abutting, compressible, removable rubber glazing strips. The inner sash is hinged and compressed to the outer by quarter-turn, spring-actuated "Compressionizers" spaced around the sash, which maintain and equalize the pressure seal, creating the Edwards Inner-Compression-Seal. . . . Easily removable rubber glazing strips are on the inside, protected from exposure and deterioration. Sash easily and quickly opened for maintenance. No metal to metal contact between outside and inside frame; eliminates "sweating" of the inside frame. Dehydrating tubes located within the sealed dead-air space without breaking or impairing permanent inner seal.

The dining cars of tomorrow built for the Pennsylvania Railroad by American Car and Foundry have Edwards Inner-Compression-Sealed Double-Glazed windows. The cars of "tomorrow" with windows of "tomorrow."

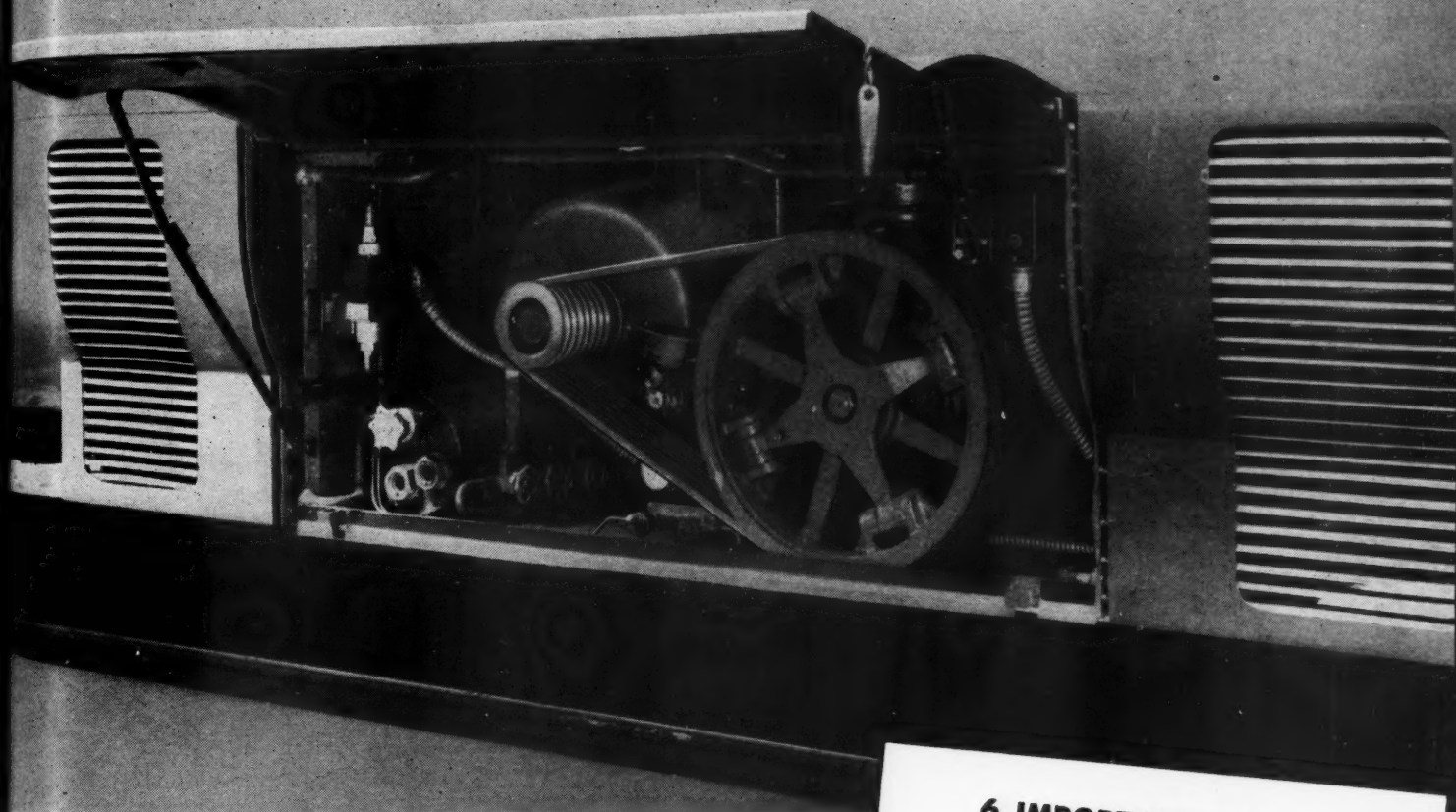
Greatest economy in preserving heat and cold with maximum passenger comfort and visibility is here combined with such rare simplicity of construction as to insure greatest convenience, least cost and minimum necessity for maintenance.

Send for complete data, specifications or convincing demonstration.

O. M. Edwards Co., Inc., Syracuse, N. Y.
50 Church Street, New York City
2557 Fargo Avenue, Chicago, Ill.

EDWARDS
INNER-COMPRESSION-SEAL
DOUBLE-GLAZED SASH

Providing the COMFORT on the NEW Pennsylvania Diners



G-E Air Conditioning G-E Power Supply

THE Pennsylvania Railroad Company's new dining cars combine beauty and comfort with utility.

They include one thing essential to air-conditioned comfort—plenty of reliable power. On these cars the Pennsylvania used General Electric generators similar to those in use on other cars where greater power was required.

On some of these cars, General Electric air-conditioning equipment is used. General Electric, Schenectady, N. Y.

6 IMPORTANT FEATURES OF G-E POWER SUPPLY

1. **Liberal margin in capacity**—the 37.5-volt machine, rated at 535 amperes (20 kw) is capable of delivering 750 amperes at reduced voltage.
2. **Completely stable** over a very wide range of speed as well as the full range of load.
3. **Extremely quick response** is obtained with the dynamic-type regulator used, which minimizes fluctuations in voltage.
4. **Accurate voltage** over a very wide range of speed and load.
5. **Outstanding reliability**, due to proper design and very sturdy construction.
6. **Very sensitive reverse-current relay** for disconnecting the generator from the battery at times of low generator voltage.

GENERAL  ELECTRIC

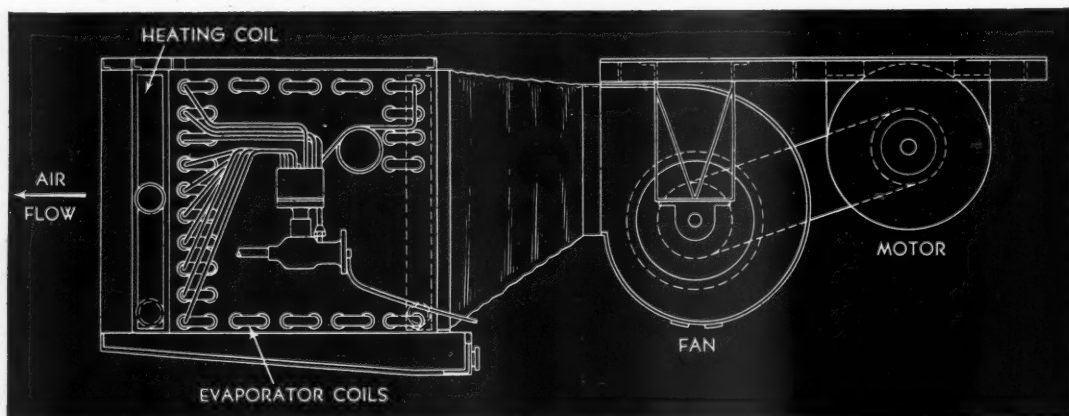
285-17

For 5 New Pennsylvania Railroad Diners

BUILT BY AMERICAN CAR & FOUNDRY COMPANY



Sturtevant Fan and Coil Assemblies For Air Conditioning Systems



Side elevation of Sturtevant Fan and Coil Assembly used in connection with General Electric Air Conditioning Systems in five new P.R.R. Diners built by American Car & Foundry Company.

FOR the five new Pennsylvania Railroad Diners, recently built by American Car & Foundry Company—and embodying an entirely new level of luxury, beauty, and comfort—Sturtevant Air Conditioning Equipment was selected for low-side service. As illustrated, this equipment in each car consists of a complete fan and coil assembly, including main distributing fans with motor drive, direct expansion evaporator coils (Freon), and heating coils.

These Sturtevant Fan and Coil Assemblies were specially designed to very exacting Pennsylvania Railroad specifications—and to fit very limited space conditions.

Also selected for installation in these diners were Sturtevant Kitchen Exhaust Fans.

Sturtevant Air Conditioning Equipment For Every Purpose

Including equipment ranging from complete air conditioning systems (ice or electro-mechanical compressor) to individual units of equipment such as fans, evaporators, condensers, heating surface, etc.

B. F. STURTEVANT CO., Hyde Park, Boston, Mass.
Branches in 40 Principal Cities

B. F. Sturtevant Company of Canada, Ltd.—Galt, Toronto, Montreal



Sturtevant "Railvane" Units or Systems are used by 37 railroads. "Railvane" Air Conditioning is protected by 40 issued patents and other patents pending.



FOR 29 YEARS . . . PIONEERS IN AIR CONDITIONING

An Even Glide

on

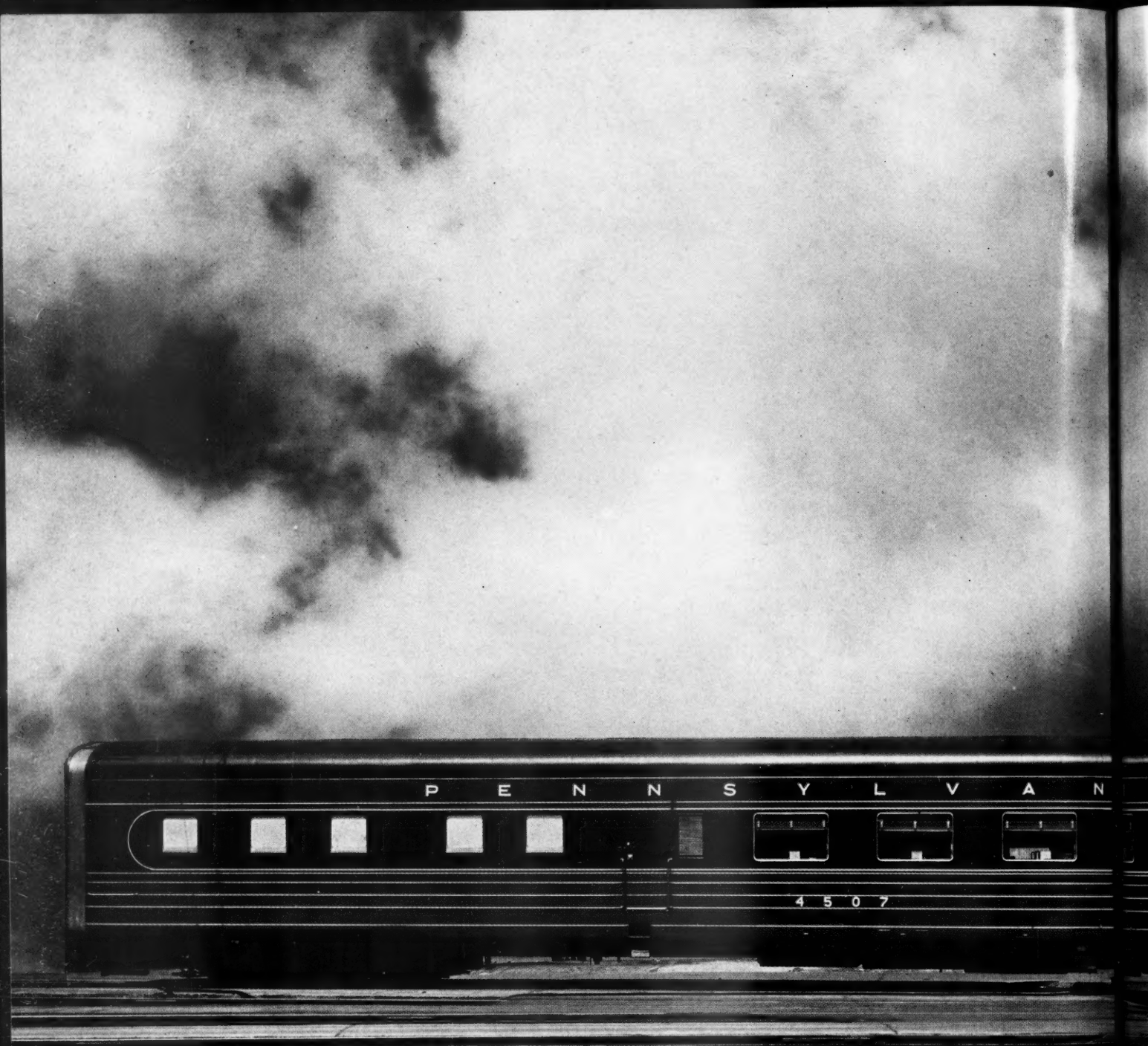


"RAILWAY" Springs contribute in a large measure to the even glide of the five new P.R.R. dining cars recently built by A.C.F.

All truck springs, including coil equalizer springs and elliptic bolster springs are of highest grade "Railway" quality, insuring maximum passenger comfort during meals.

"Railway" Springs are your guarantee of easy riding equipment with minimum upkeep.

AMERICAN LOCOMOTIVE COMPANY
Railway Steel Spring Division
30 CHURCH STREET, NEW YORK, N. Y.





LIGHT WEIGHT

Balanced Design

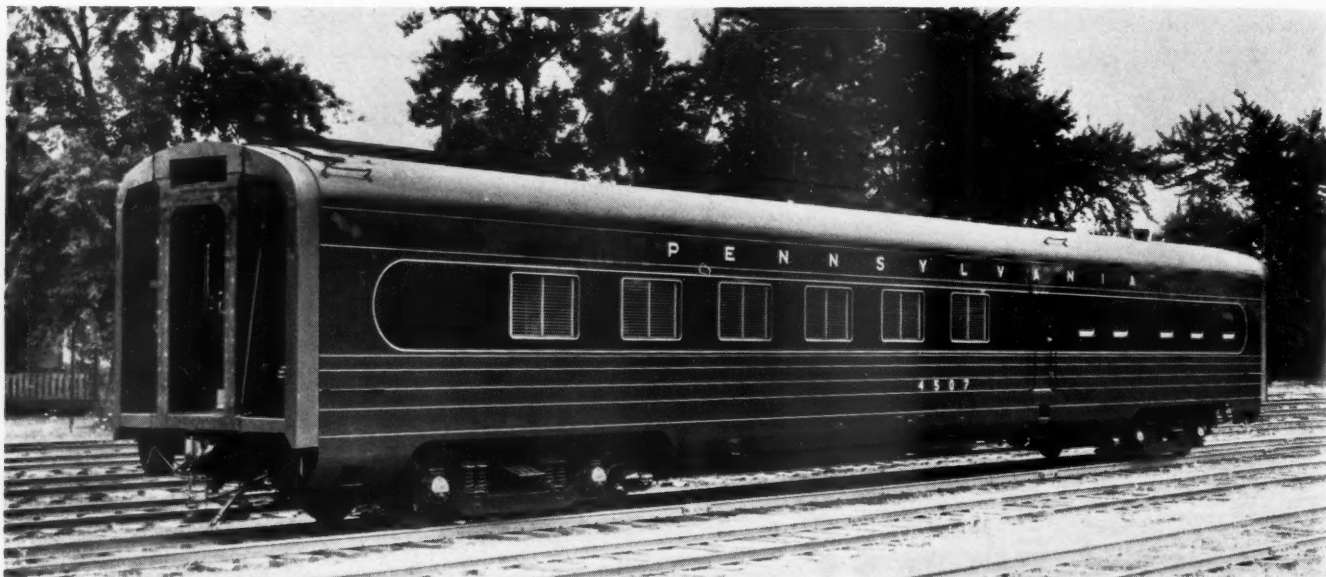
THE FIVE new light-weight dining cars recently designed and built by Q.C.F. for the Pennsylvania Railroad, give so remarkably smooth a ride that we are sure passengers will comment most favorably upon this feature.

- This is due to their exceptionally well-balanced design, as worked out by Q.C.F. and Pennsylvania Railroad engineers. Through the use of low-alloy, high tensile steel, and other light-weight materials, together with the Q.C.F. welded construction, great strength is had at a substantial reduction in weight. Special treatment given to the wheels and trucks, each mounted pair of wheels being balanced and ground mounted to perfect rotundity, results in a perfectly smooth riding car.

- The underframe, built up of light-weight pressed and rolled steel members welded together with a light-weight A.A.R. steel "Z" section, fully meets the new A.A.R. requirements for buffing, as well as the standards for cars in unrestricted service
- This dining car, with seating capacity for 48 persons, weighs less than 114,000 lbs. without water, kitchen utensils and other movable equipment
- Call upon Q.C.F. to build to your requirements, or to design and build for you modern equipment of well-balanced and advanced design.

AMERICAN CAR AND FOUNDRY COMPANY

NEW YORK • CHICAGO • ST. LOUIS • CLEVELAND
PHILADELPHIA • PITTSBURGH • ST. PAUL • SAN FRANCISCO



THE fifteen streamline diners built for the Pennsylvania Railroad are equipped with A.A.R. TIGHT LOCK COUPLERS — an aid to greater safety and riding comfort.

Some of the advantages of the Tight Lock Coupler are:

Eliminates the slack in the coupler contour.

Will couple with present standard couplers, and when so coupled provides substantial reduction in contour slack.

Coupler is self-compensating for wear and seating of parts.

Wear of coupler head and parts is materially reduced, thus increasing the service life.

Elimination of noise caused by coupler slack.

Reduction of fatigue failures in front face and knuckle side wall.



Two A.A.R. Tight Lock Couplers Coupled.

NATIONAL MALLEABLE AND STEEL CASTINGS CO.

General Offices: CLEVELAND, OHIO

Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco.

Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

WESTINGHOUSE *Type D-22* *Air Brake* **EQUIPMENT**

**On
Fifteen
New
Dining
Cars**



Taking its place with other distinctive equipment, the most advanced Westinghouse passenger car brake of the purely pneumatic type, including the D-22 Control Valve, is installed on these fifteen modern diners built for the Pennsylvania Railroad by three manufacturers—Pullman, Budd, and ACF. It embodies up-to-date functional and structural features that assure good performance and the maintenance of operating integrity, thereby making a notable contribution to satisfactory train service.



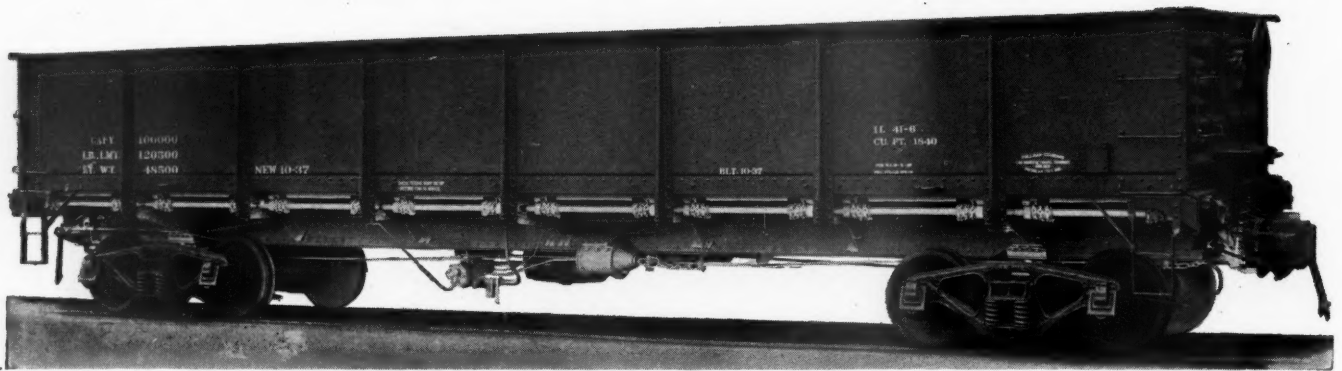
Superior design, construction, and placement of coordinated elements of the Control Valve, together with adequate protection through the use of efficient air filters and means to prevent leakage, assure consistent performance over long periods with low maintenance cost. Compactness and light weight are other outstanding features.

WESTINGHOUSE AIR BRAKE COMPANY

General Office and Works: WILMERDING, PENNA.

SPECIFY

Griffin CHILLED CAR WHEELS



• *For New Equipment*

CONSIDER carefully the initial saving per car, and subsequent saving in maintenance, through the use of the present improved Chilled Car Wheel.

Instrumental measurement of chill, together with improved process of annealing, assures a decided increase in wheel service.

Accurate records of Griffin Wheels placed under a test lot of 125 cars 12 years ago, show that 80% of the wheels are still in service. The saving on wheels to date on this lot of cars, as compared with the same cars equipped with other kinds of wheels, would be sufficient to provide wheels for the LIFE OF THE CARS.

GRIFFIN WHEEL COMPANY

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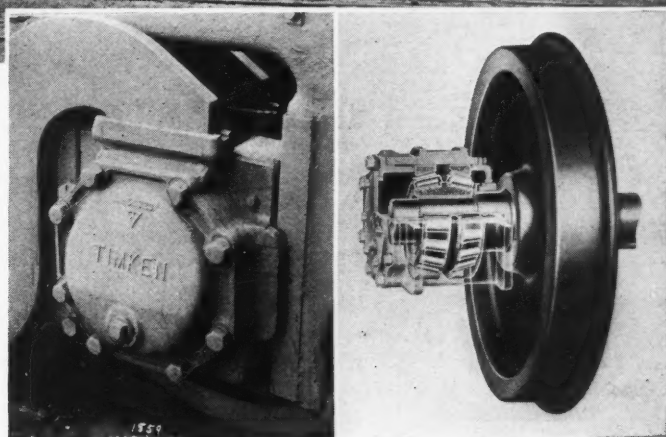
Denver
Salt Lake City

Los Angeles
Tacoma

ALL 15 NEW PENNSYLVANIA DINING CARS ARE EQUIPPED WITH TIMKEN BEARINGS



In line with its determination to make these new cars thoroughly modern from roof to rail, the Pennsylvania Railroad used TIMKEN Roller Bearings. The cars were built by American Car & Foundry Co., E. G. Budd Mfg. Co. and Pullman Standard Car & Mfg. Co.



Other Pennsylvania passenger car equipment operating on TIMKEN Bearings includes:



Pullman Cars used on the "Broadway Limited", "The General" and other crack Pennsylvania trains.

Coaches

Dining Cars

M. U. Suburban Cars

M. U. Double Deck Cars

For modern speeds, comfort and economy put your new and existing passenger cars on TIMKEN Bearings.

TIMKEN

RAILWAY ROLLER BEARINGS

THE TIMKEN ROLLER BEARING
COMPANY, CANTON, OHIO

LUXURIOUS RIDING COMFORT



**NO JERKS, JARS or NOISE on
these new PENNSYLVANIA diners**

Waughmat Twin Cushions provide real passenger comfort. In the train which is completely Waughmat Twin Cushion equipped, including the locomotive, a continuous shockfree connection is maintained throughout the entire train. Twin Cushions are being installed on new and rebuilt cars everywhere.

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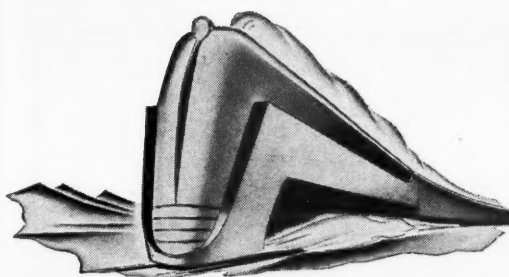
NEW YORK

CHICAGO

ST. LOUIS

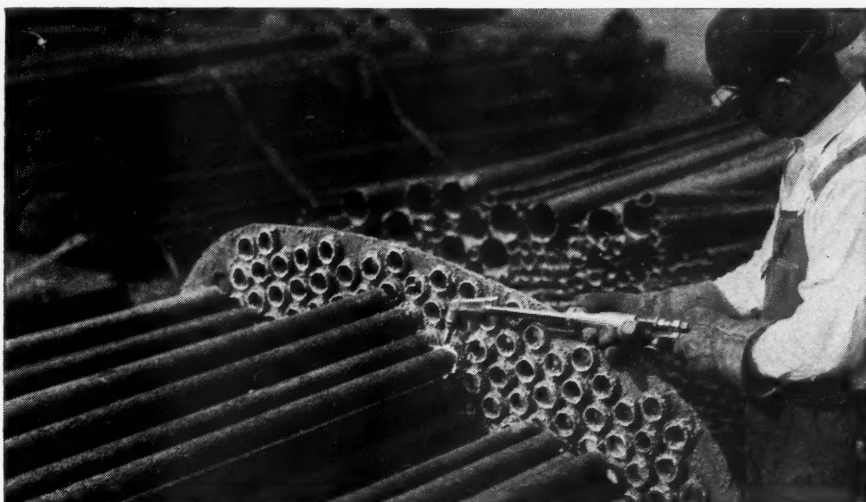


WAUGHMAT TWIN CUSHIONS



Oxweld Railroad Service TOPICS

1912 — OVER A QUARTER CENTURY OF SERVICE TO AMERICAN RAILROADS — 1939



SCRAPPING LOCOMOTIVES *brings higher returns plus salvage*

Railroads obtain a higher price for scrap by reducing obsolete equipment to charging-box size and classifying the scrapped metal. The higher returns obtained for the classified scrap will in most cases completely absorb the cost of oxy-acetylene cutting and, in addition, result in a substantial net profit for the railroad. Under Oxweld procedures, the demolition work is organized to eliminate lost motion and minimize rehandling. This systematic arrangement of operations results in increased speed and efficiency and lower costs. Further appreciable economies are realized by the salvage of usable parts and materials as the scrapping proceeds.

SCRAP FLUES USED AS CONSTRUCTION MATERIAL

Many useful items can be made from scrap flues by the use of cutting and welding blowpipes. A few examples are described here. Oxweld representatives will gladly suggest other uses for scrap material.

Right-of-Way Gates — Gates of the exact dimensions required to fit a given fence opening are quickly and economically made from scrap flues. The flues are cut to length and beveled with the cutting

blowpipe, then readily fabricated by welding into a rigid and serviceable gate.

Fences — Low fences for use at various points around shops and yards are easily made by welding together posts and rails cut from scrap flues.

Cattle Guards — Scrap flues are quickly cut into the required lengths for road crossing cattle guard wings. When enough flues for several wings have been prepared, the material is easily laid out and welded into sturdy units.

BRIEFS

"Unionmelt" Welding — The frames and engine bases of the diesel locomotives for a number of the new streamlined trains are being largely fabricated from stock steel by the speedy, automatic "Unionmelt" welding process.

Butt-Welded Rail — Smooth-riding, clickless track and the elimination of signal bonds and joint maintenance are among the advantages of butt-welded rail which can be obtained with the Oxweld Automatic Pressure-Type Rail Welding Process.

Scrap Tires are Assets — When reduced to charging-box size, discarded locomotive tires usually bring a higher return as scrap metal. The tires are usually



cut into pieces with the cutting blowpipe or nicked with the blowpipe as shown and then broken with a skullcracker.

In addition to bringing to railroads the welding and cutting operations described on this page, Oxweld Railroad Service provides for rebuilding rail ends; reclaiming joint bars; welding signal bonds; hardening rail ends; and hard-facing wearing parts. When you have need for any of these operations, consult The Oxweld Railroad Service Company, Unit of Union Carbide and Carbon Corporation, Carbide and Carbon Building, Chicago and New York.



The words "Oxweld" and "Unionmelt" are registered trade-marks of Units of Union Carbide and Carbon Corporation.



*Partial View of Kitchen
and Pantry Equipment
Furnished on the New
Pennsylvania Diners*

Colonna

leads again in supplying food and beverage equipment on new PENNSYLVANIA RAILROAD DINERS, adding another satisfied customer to our long list of railroads using our equipment.

ANGELO COLONNA

specializing in food and beverage equipment

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Mintex

Vestibule Face Plate Lining for Modern Passenger Cars

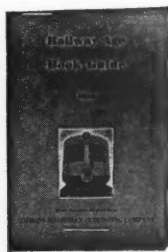
QUIET operation of modern trains is essential to passenger good will. MINTEX Vestibule Face Plate Lining as applied to the new Pennsylvania Railroad diners built by A.C.F., removes the objectionable noise incident to older types of equipment. It is easily installed and wears like iron, reducing cost of application to a minimum.

Information on MINTEX Anti-Friction Materials will be gladly furnished at any of our offices.

SCANDINAVIA BELTING CO.

Newark, N. J. — Pittsburgh, Pa. — Cleveland, O. — Charlotte, N. C.

Railway Age Book Guide



Here is a handy reference booklet on railroad books that are of interest to readers of "Railway Age." In it are described practically all of the books published during the past decade that are in print. They are classified under subject headings and arranged in chronological order. A title index in the back facilitates quick reference.

SUBJECT INDEX

Accounting — Administration — Consolidation — Co-ordination — Economics — Finance — General — History — Law — Officers — Personnel — Rates — Regulation — Statistics — Traffic Management — Valuation.

1936, 28 pages, 6 x 9 inches, paper cover.

1938. 12 page Supplement.

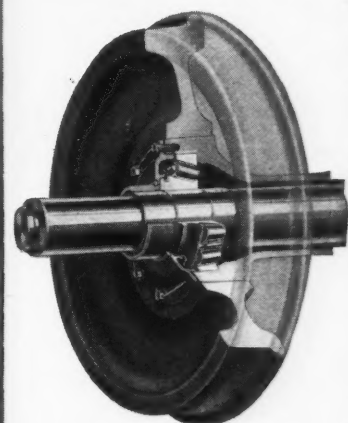
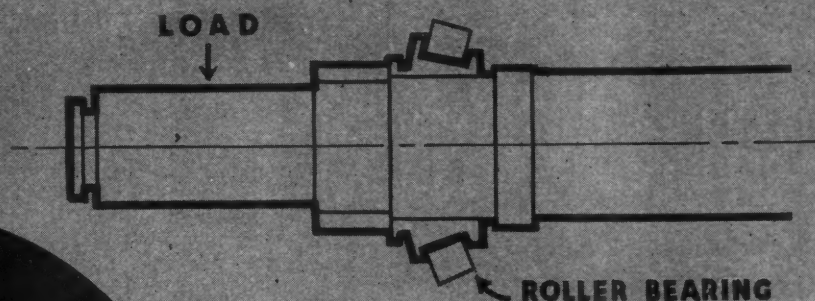
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"Railroads on Parade" is a feature of the New York World's Fair you should not miss.

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THE
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CONSTRUCTION



Roller Bearings used in A.S.F. Units are manufactured by **SKF** Industries

The vertical load is applied to the inner axle member of an A. S. F. Roller Bearing Unit in exactly the same way as to the friction bearing axle.

The roller bearing race and shrink collar are attached to this axle at the same location as the wheel to the friction bearing axle. No new principles of axle design are involved.

The axle carries only the vertical load. Also, it does not revolve, hence is not subject to stress reversal with each revolution of the wheel.

Service has proved its safety.



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STAINLESS STEEL

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TENSILE STRENGTH

YIELD POINT

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(Representative of high
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MR. RAILROAD EXECUTIVE: *Which material will
you select for passenger cars on your railroad?*

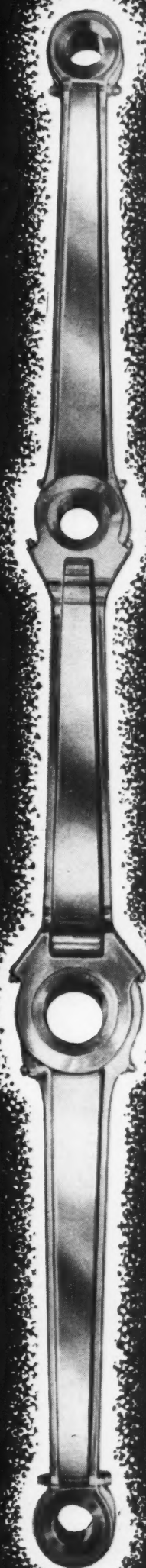
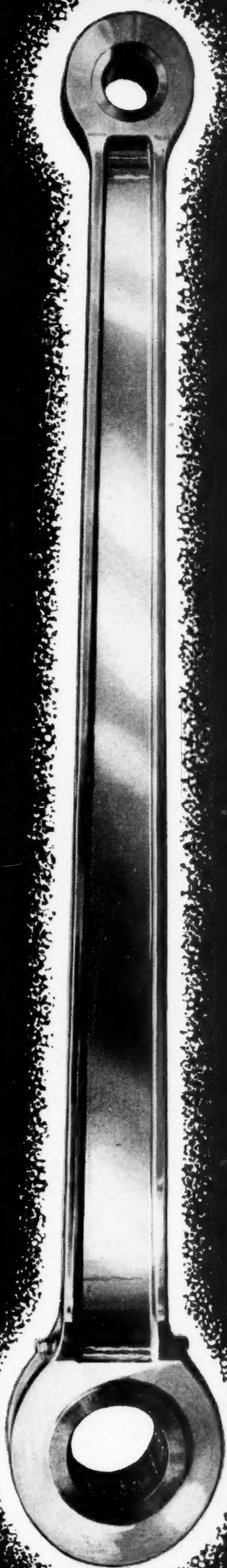
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Valuable Books for Your Library

Trains, Tracks and Travel

By T. W. VAN METRE

Professor of Transportation, Columbia University



The new edition of this popular book on railroads describes latest practice. There is a complete new chapter on streamlined trains and additions to others covering the new developments in air brakes, air conditioning of passenger cars and in high-speed Diesel and electric locomotives. Among the numerous new illustrations are shown the new streamlined trains. This is an excellent book for a boy who wants to know more about railroads and for the average reader.

1939. 5th. 330 pages, 300 illus., 7 x 9½ in., cloth \$3.50.

Railroad Electrification and the Electric Locomotive

By ARTHUR J. MANSON

Manager, Transportation Sales Department, Westinghouse Electric & Manufacturing Company



Written primarily for railway officials and operating men who desire a general knowledge of the design, construction, and operation of electric locomotives and of their application to different kinds of railroad service. Typical problems encountered in electrification of steam

railroads are outlined, together with their solutions. Fundamental principles are stressed, and the book is illustrated with photographs, detail drawings, diagrams and charts.

1925. 2nd, 332 pages, 146 illus., 6 x 9 inches, cloth, \$3.00



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Railroad Mergers

By JOHN WILL CHAPMAN

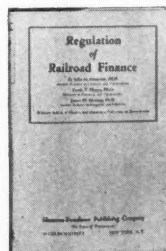
Member of Investment Staff, United States Trust Company of New York; Formerly Statistical and Security Analyst for the Standard Statistics Company

This book deals with the causes, methods of effecting and results of railroad mergers. It is packed with facts of value to anyone concerned in any way with changes to be effected through mergers of American railroads into large systems. Dealers in railroad securities will find it serviceable as a reference book on subjects of vital interest in their business. Bond owners will be particularly interested in the discussion of credit factors.

1934. 169 pages, 25 maps, 6 x 9 inches, cloth, \$3.00

Regulation of Railroad Finance

By JOHN H. FREDERICK, Ph. D., FRANK T. HYPPS, Ph. D., and JAMES M. HERRING, Ph. D.,
Wharton School of Finance and Commerce, University of Pennsylvania.



The regulation of the financial affairs of railroads by the Federal government through the Interstate Commerce Commission, under the Transportation Act of 1920, is herein clearly explained. Various tests applied by the Commission in determining the elements of public interest to which the statute usually refers are traced, together with the nature and reasons for the Commission's action

237 pages, tables, index, 6 x 9 inches,
cloth, \$3.50

When Railroads Were New

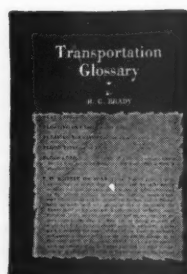
By CHARLES FREDERICK CARTER

A fascinating human interest story of the early American and Canadian railroads and of the men who built and ran them. The author, an old railroad man, tells of the beginnings of the Erie, the Pennsylvania, the Baltimore and Ohio, the New York Central, the first Pacific railroad, the Santa Fe, the Rio Grande, the Canadian Pacific and other lines. It is illustrated with reproduction of wood cuts of early locomotives and railroad scenes.

4th (Centenary). 338 pages, 17 illustrations,
6 x 9 inches, cloth, \$2.50

Transportation Glossary

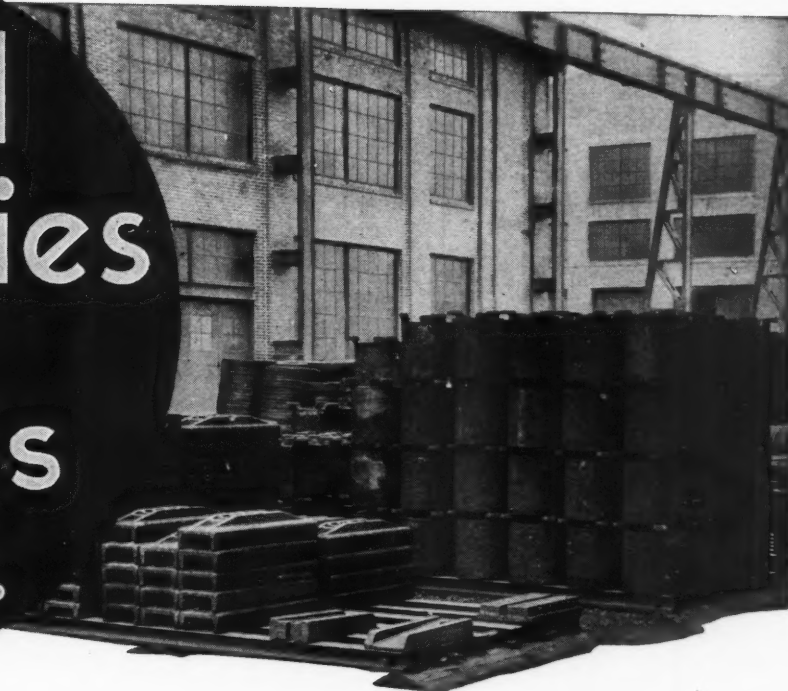
By H. G. BRADY



Technical and semi-technical terms, phrases and expressions in more common use in railway, highway, air and marine transportation, and in port traffic are concisely defined in this handy reference book. Ordinary dictionaries, thesauri and law book sources furnish little information on transportation terms and this book fills a long felt need. It is printed in large clear type and cross references facilitate quick tracing of desired information.

119 pages, 5 x 7 inches, flexible, \$1.00

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PROPOSALS

Sealed proposals will be received in the office of the Purchasing Agent, the Salt Lake & Utah Railroad Corporation, Terminal Building, Salt Lake City, Utah, until twelve o'clock noon, Mountain Standard Time, October 5, 1939, bids to be publicly opened on that date for furnishing the necessary material for six (6) railroad grade crossing protective devices (commonly called flashing or protecting signals) to be installed under the Federal Grade Crossing Program in the State of Utah. Further information may be obtained from Helen B. Keating, Purchasing Agent, The Salt Lake & Utah Railroad Corporation.

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 - 3, Portable Single Car Air Brake Testers
 - 1, 25-ton O. H. Crane, span 50' 8 3/4, 3/60/500
 - 3, Loco. Cranes, with/without Magnets
 - 3, Locomotives, s.g., Diesel or Gas.
- Address Box 526 Railway Age, 30 Church Street, New York City.

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"Railway Review"

January-March, 1926; April-June, 1926.

"Railway Age"

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These volumes are 9 x 12 x 3 inches, weigh 5 pounds, and are bound in buckram or in buckram trimmed with leather. \$2.00 each, postpaid.

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1

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GOLD CAR HEATING & LIGHTING CO.
NEW YORK

For Index to Advertisers
See Last White Page

EDGEWATER STEEL COMPANY PITTSBURGH, PA.

Details of our products appeared in the following
issues of *Railway Age* during 1936, 1937, 1938, 1939:

1936—July 4, 18—Sept. 5—Oct. 3—Nov. 7—Dec. 5.
1937—Jan. 2—Feb. 6—March 6—April 3—May 1—June 5, 16, 17,
18, 21, 22, 23—July 3—Aug. 7—Sept. 4, 18—Nov. 6—Dec. 4.
1938—Jan. 1—Feb. 5, 26—March 5—May 7—July 9, 23—Sept. 24
—November 5—December 3.
1939—Jan. 7—February 4—March 4—April 1—May 6—June 17,
24—July 1—September 2.



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Railway Age

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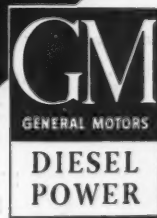
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OCT 3 1939

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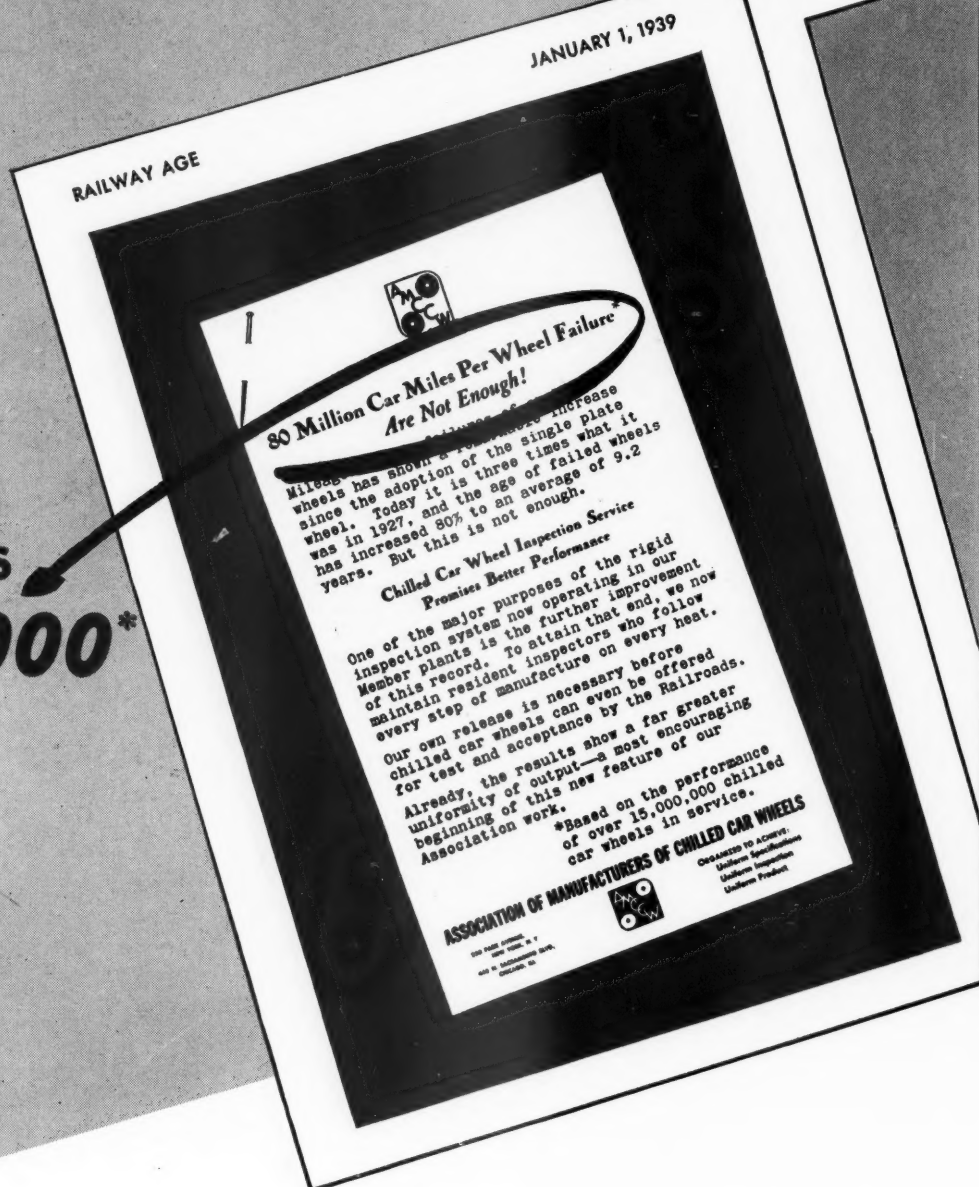


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A recent study along this line appeared in A. A. R. Signal Section Proceedings Vol. XXXV No. 1 pp. 10-12, which

reports that average train speeds increased, yearly passenger train time saved 730 hours, yearly freight time saved 2007 hours under cTc operation.

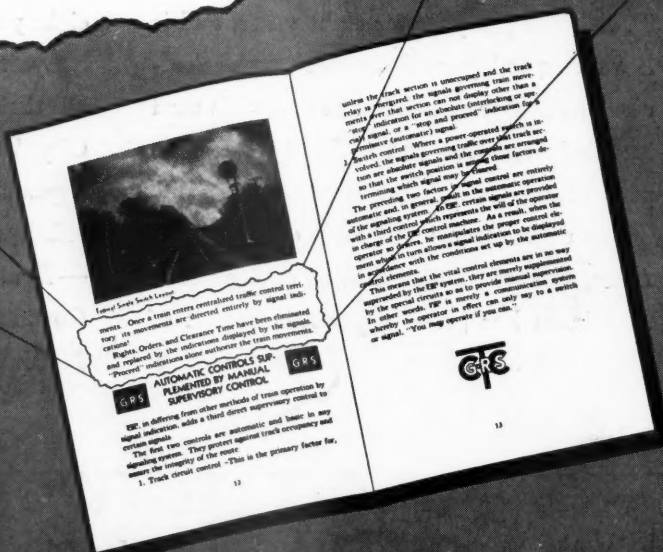
Bulletin 169 (below) gives many other reasons for train operation by G-R-S cTc.

A copy will be mailed promptly on request.

ments. Once a train enters centralized traffic control territory, its movements are directed entirely by signal indications! Rights, Orders, and Clearance Time have been eliminated and replaced by the indications displayed by the signals. "Proceed" indications alone authorize the train movements.

G-R-S Bulletin 169

"Centralized Traffic Control" →



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